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THE

WORKS

OF

ARISTOTLE,

THE

FAMOUS PHILOSOPHER.

IN FOUR PARTS.

CONTAINING

I. His COMPLETE MASTER-PIECE; displaying the secrets of Nature in the Generation of Man. To which is added, The FAMILY PHYSICIAN; being approved remedies for the several distempers incident to the human body.

II. His EXPERIENCED MIDWIFE; absolutely necessary for Surgeons, Midwives, Nurses, and Child-bearing Women.

III. His BOOK OF PROBLEMS, containing various Questions and Answers, relative to the state of Man's body.

IV. His LAST LEGACY; unfolding the Secrets of Nature respecting the Generation of Man.

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TO THE READER.

To say that Aristotle, the learned author of the following sheets, was reported to be the most learned philosopher in the World, is no more than what every intelligent person already knows: nor can any think otherwise, who will give themselves time to consider that he was the scholar of Plato (the wisest philosopher of his time) and under whom Aristotle profited so much, that he was chosen by king Philip of Macedon as the most worthy and proper person in his dominions to be tutor of his son Alexander, by whose wise precepts and instructions Alexander became master of so great wisdom, judgment, prowess, and magnanimity, that he justly obtained the title of the Great. Alexander himself was so sensible of the advantage he received from the instructions of so great a Stagirite (for so Aristotle was called from the country of Stagira, where he was born) that he often declared he was more beholden to his tutor Aristotle for the cultivation of his mind, than to his father Philip for the kingdom of Macedon.

Though Aristotle applied himself to the investigation of the secrets of nature, yet he was pleased to bring into a fuller and more true light those secrets with respect to the generation of man. This he styled his Master-Piece; *and in this he has made so thorough a search, that he has as it were turned nature inside out.*

The divine records assure us, that the secrets of nature have been the study of divers illustrious persons, equally renowned for wisdom and goodness; the first of whom, Job, has made it sufficiently evident by that excellent philosophical account he gives of the generation of man, in the tenth chapter of the book which bears his name, where he says, 'Thine hands have made me, and fashioned me together round about: Thou hast poured me out as milk and curdled me like cheese: Thou hast clothed me with skin and flesh, and hast fenced me with bones and sinews'——David, one of the greatest kings of Israel, whose piety was superior to his power, being peculiarly styled a man after God's own heart, says, in his divine soliloquies to his Creator, 'Thou hast covered me in my mother's womb; I will praise thee, for I am fearfully and wonderfully made: Marvellous are thy works, and that my soul knoweth right well. My substance was not hid from thee when I was in secret, and curiously wrought in the lowest parts of the earth: Thine eye did see my substance, yet being unperfect; and in thy book all my members were written, which in continuance were fashioned, when as yet there was none of them.'

Let the words of holy Job and those of David be put together, and I will not scruple to affirm, that they make the most accurate system of physiology respecting the generation of man that has ever yet been penned; therefore why should not the mysteries of nature be inquired into without censure, since, from this inquiry, so much praise resounds to the God of nature! For, the more we know of his works the more our hearts will be inclined to praise him, as we see in the instance of David above mentioned.

That the knowledge of the secrets of nature is too often abused by many persons, I readily grant; and think it very unfortunate that there should be a generation of such profligate persons in the world; but at the same time do aver that this is no objection to the work.

Having said thus much of the wonderful works of nature in the generation of man, I shall next proceed to give the reader the best translation possible of that excellent treatise of the renowned Aristotle, which he was pleased to style his MASTER-PIECE.

I cannot help observing, that having met with a collection of approved receipts by the great Hippocrates, and thinking they would be very acceptable to my readers, I have added the same by way of supplement, at the end of the Master-Piece.

Ariſtotle's Maſter-Piece.

PART I.

THE SECRETS OF NATURE DISPLAYED.

INTRODUCTION.

IT is ſtrange to ſee how things are ſlighted only becauſe they are common, though in themſelves worthy of the moſt ſerious conſideration, this is the very caſe of the ſubject I am now treating of. What is more common than the begetting of children? And what is more wonderful than the plaſtic power of nature, by which children are formed. For tho' there is radicated in the very nature of all creatures, a propenſion which leads them to produce the image of themſelves, yet how theſe images are produced after thoſe propenſions are ſatisfied, is only known to thoſe who trace the ſecret meanders of nature in their private chambers, to thoſe dark receſſes of the womb, where this embryo receives formation. The original of which proceeds from the divine command, *increaſe and multiply.* The natural inclination and propenſity of both ſexes to each other, with the plaſtic power of nature, is only the energy of the firſt bleſſing, which to this day upholds the ſpecies of mankind in the world.

Now ſince phyloſophy informs us, that *Neſce teipſum*, is one of the firſt leſſons a man ought to learn; it cannot ſurely be accounted an uſeleſs piece of knowledge for a man to be acquainted with the cauſe of his own being, or by what ſecret power of nature it was, that coagulated milk (as a divine author calls it) came to be ſubſtantiated into a human body. The explanation of this myſtery, and the unfolding the plaſtic power of nature, in the ſecret workings of generation and the formation of the ſeed of the womb, is the ſubject of the following treatiſe; a ſubject ſo neceſſary to be known to the female ſex, that many for want of this knowledge have periſhed with the fruit of their womb alſo; who, had they but underſtood the ſecrets of generation, which are diſplayed in this treatiſe might have been ſtill living. For the ſake of ſuch. I have compiled this work, which I have divided into two parts in the following manner.

1ſt, I will ſhew that nature need not be aſhamed of her work; and give a particular deſcription of the parts or organs of generation in man, and afterwards in woman; and then ſhew the uſe of theſe parts in the act of coition; and how poſitively nature has adapted them to the end for which ſhe ordained them.

2dly, I will point out the prohibition or reſtriction, that the Creator of all things and Lord of nature has put upon man by the inſtitution of marriage, with the advantage it brings to mankind.

3dly, I ſhall ſhew when either ſex may enter into a married ſtate, and be fit to anſwer the end of the creation, &c.

4thly, I shall discourse of virginity, and therein shew what it is, how it is known, by what means it may be lost, and how a person may know that it is so.

In the second part, which chiefly relates to married women, and the preservation of the fruit of the Womb, for the propagation of mankind to the world, I shall shew,

1st, What conception is: what is pre-requisite thereunto: how a woman may know when she hath conceived, and whether a boy or girl.

2dly, Shew how a woman that has conceived ought to order herself.

3dly, Shew what a woman ought to do that is near the time of her delivery, and how she ought to be assisted.

4thly, I shall shew what are the obstructions of conception, and therein discourse largely about barrenness, and shew what are the causes, and cure thereof, both in men and women.

5thly, Direct midwives how they could assist women in the time of their lying in, bringing several other material matters proper to be spoken of under each of these several heads; which will sufficiently render this book what Aristotle designed it, his COMPLETE MASTER-PIECE.

CHAP. I.

A Particular Description of the Parts and Instruments of Generation both in Men and Women.

SECTION I.

Of the instruments of generation in men, with a particular description thereof.

THOUGH the instruments or parts of generation in all creatures, with respect to their outward form, are not perhaps the most comely; yet, in compensation of that, nature has put upon them a more abundant and far greater honour than on other parts, in ordaining them to be the means by which every species of being is continued from one generation to another. And therefore though a man or woman were through the bounty of nature, endowed with angelic countenances, and the most exact symmetry and proportion of parts that concurred together to the making up of the most perfect beauty, yet, if they were defective in the instruments of generation, they would not for all their beauty, be acceptable to either of the other sex; because they would be thereby rendered incapable of satisfying the natural propensions which every one finds in himself. And, therefore, since it is our duty to be acquainted with ourselves, and to search out the wonders of God in nature, I need not make any apology for anatomizing the secret parts of generation.

The organ of generation in man, nature has placed obvious to the sight, and is called the yard; and because hanging without the belly, is called the penis, *a pendendo*. It is in form long, round, and on the upper side flattish, and consists of skin, tendons, veins, arteries, and sinews, being seated under the Ossa Pubis, and ordained by nature for a two fold work, viz. for the evacuating of urine, and conveying the seed into the matrix. The urine which it evacuates is brought to it through the neck of the Vesica Urinariæ, and the seed which it conveys into the matrix, is brought into it from the Vesiculae Seminales. But to be more particular.

Beſides the common parts, as the cuticle, the ſkin and the Membrana Carnoſa, it has ſeveral internal parts proper to it, of which number there are ſeven, viz.

The two nervous bodies; the Steptun; the Urethra; the Glands; the Muſcles; and the Veſſels: of each of theſe diſtinctly, in the order I have placed them; and, firſt, of

The two nervous bodies. Theſe are called ſo from their being ſurrounded with a thick, white, nervous membrane, though their inward ſubſtance is ſpongy, as conſiſting principally of veins, arteries, and nervous fibres, interwoven like a net. And nature has ſo ordered it, that when the nerves are filled with animal ſpirits, and the arteries with hot and ſpirituous blood, then the yard is diſtended, and becomes erect; when the flux of the ſpirit ceaſes, when the blood and the remaining ſpirits are abſorbed, or ſucked up by the veins, and ſo the Penis becomes limber and flaggy.

2. The Second internal part is the Steptun Lucidum, and this is in Subſtance white and nervous, or ſinewy; and its office is to uphold the two lateral or ſide ligaments and the Urethra.

3. The third is the Urethra, which is only the channel by which both the ſeed and urine are conveyed out; it is in ſubſtance ſoft and looſe, thick and ſinewy, like that of the ſide ligaments. It begins at the neck of the bladder, but ſprings not from thence, only is joined to it, and ſo proceeds to the glands. It has three holes in the beginning, the largeſt whereof is in the midſt, which receives the urine into it. The other two are ſmaller, receiving the ſeed from each ſeminal veſſel.

4. The fourth is the Glands, which is at the end of the Penis, covered with a very thin membrane, by reaſon of a Præputium, or Foreſkin, which in ſome covers the top of the yard quite cloſe, in others not; and by its moving up and down in the act of copulation brings pleaſure both to the man and woman. The extreme part of this cover, which I call Præputium, and which is ſo called a *Præputando*, from cutting off, as the Jews were commanded to cut it off on the eighth day. The ligament, by which it is faſtened to the glands is called Frænum, or the bridle.

5. The fifth thing is the Muſcles, and theſe are four in number, two being placed on each ſide. Theſe muſcles (which are inſtruments of voluntary motion, and without which no part of the body can move itſelf) conſiſts of fibrous fleſh to make up their body; of nerves for the ſenſe; of veins for their vital heat; and of a membrane or ſkin to knit them together, and to diſtinguiſh one muſcle from the other, and all of them from the fleſh. I have already ſaid there are two of them on each ſide; and I now will add, that one on each ſide is ſhorter and thicker, and that their uſe is to erect the yard, from whence they have obtained the name of erectors. And having told you that two of them are thicker and ſhorter than the other, I need not tell you that the other two are longer and thiner; only I take notice, that the office of the two laſt is to dilate (if you will) open the lower part of the Urethra, both for making water, and voiding the ſeed, and therefore are called Accelerators.

6. The ſixth and laſt things are the veſſels, which conſiſt of Veins, Nerves and Arteries; of which ſome paſs by the ſkin, and are viſible to the eye, and others paſs more inwardly. For indeed the

Arteries are diſperſed through the body of the yard, much more than the veins, and the diſperſion is contrariwiſe, the right artery being diſperſed to the left ſide, and the left to the right: as for the two nerves, the greater is beſtowed upon the muſcles and the body of the yard, and the leſs upon the ſkin.

What I have hitherto ſaid relates to the yard, properly ſo called; but, becauſe there are ſome appendices belonging thereto, which, when wanted, render the yard of no uſe in the act of generation, it will alſo be neceſſary before I conclude the ſection, to ſay ſomething of them, I mean the ſtones, or teſticles, ſo called becauſe they teſtify the perſon to be a man; their number and place is obvious; and as to their uſe, in them the blood brought thither by the ſpermatic arteries is elaborated into ſeed. They have coats or coverings of two ſorts, proper and common; the common are two, and inveſt both the teſtes: the outermoſt of the common coats, conſiſts of the cuticula, or true ſkin, called Scrotum, hanging out of the abdomen, like a purſe: the Membrana Carnoſa is in the innermoſt. The proper coats are alſo two: the outer called Elithroidis or Vaginalis, the inner Albugiena; into the outer are inſerted the Cremaſters: to the upper part of the teſtus are fixed the Epidermis, or Paraſtatæ, from whence ariſe the Vaſa Deferentia, or Ejaculatoria: which when they approach near the neck of the bladder, depoſit the ſeed into the Siculæ Seminales, which are each or two or three of them, like a bunch of grapes, and emit the ſeed into the urethra, in the act of copulation. Near thoſe are the Paraſtatæ, which are about the bigneſs of a walnut, and join to the neck of the bladder. Theſe afford an oily, ſlippery and ſalt humour, to beſmear the urethra, and thereby defend it from the acrimony of the ſeed and urine. Beſides theſe veſſels, by which the blood is conveyed to the teſtes, or of which the ſeed is made, and the arteriæ ſpermaticæ, there are alſo two; and ſo likewiſe are the veins, which carry out the remaining blood, which are called venæ ſpermaticæ.

And thus thoſe nobler parts we ſee,
For ſuch the parts of generation be;
And they that carefully ſurvey, will find
Each part is fitted for the uſe deſign'd;
The pureſt blood we find, if well we heed,
Is in the teſticles turn'd into ſeed;
Which by moſt proper channels is tranſmitted
Into the place by nature for it fitted;
With higheſt ſenſe of pleaſure to excite
In amorous combatants the more delight;
For in this work nature doth deſign
Profit and pleaſure in one act to join.

SECTION II.

Of the ſecret parts in Women.

WOMAN, next to man, the nobleſt piece of this creation is bone of his bone, and fleſh of his fleſh, a ſort of ſecond ſelf; and, in a married ſtate, are accounted but one, as the poet ſays,

Man and wife are but one right
Canonical hermaphrodite.

It is therefore the ſecret parts of that curious piece of nature that we are to lay open, which we will do with as much modeſty as will conſiſt with ſpeaking intelligibly.

The external parts commonly called Pudenda (from the ſhame-facedneſs that is in women to have them ſeen) are the lips of the great orifice, which are viſible to the eye; and in thoſe that are grown, are covered with hair, and have pretty ſtore of ſpongy fat: their uſe being to keep the internal parts from all annoyance by outward accidents.

Within theſe are the Nymphæ, or wings, which preſent themſelves to the eye when the lips are ſevered, and conſiſts of ſoft and ſpongy fleſh, and the doubling of the ſkin placed at the ſides of the neck, they compaſs the clitoris, and both in form and colour reſemble the comb of a cock, looking freſh and red, and in the act of coition receive the penis or yard betwixt them; beſides which they give paſſage both to the birth and urine. The uſe of the wings and knobs like myrtle berries, ſhutting the orifice and neck of the bladder, and by the ſwelling up, cauſe titilation and delight in thoſe parts, and alſo to obſtruct the voluntary paſſage of the urine.

The next thing is the clitoris, which is a ſinewy and hard part of the womb, replete with ſpongy and black matter within, in the ſame manner, as the ſide ligaments of the yard; ſuffers erection and falling in the ſame manner, and both ſtirs up luſt and gives delight in copulation, for without this, the fair ſex neither deſire nuptial embraces, nor have pleaſure in them, nor conceive by them; and according to the greatneſs or ſmallneſs of this part, they are more or leſs fond of men's embraces; ſo that it may properly be ſtyled the ſeat of luſt.

Blowing the coals of thoſe amorous fires,
Which youth and beauty to be quench'd requires.

And it may well be ſtiled ſo, for it is like a yard in ſituation, ſubſtance, compoſition, and erection, growing ſometimes out of the body two inches, but that happens not but upon ſome extraordinary accident. It conſiſts, as I have ſaid, of two ſpongy and ſkinny bodies, which being a diſtinct original, form the Os Pubis, the head of it being covered with a tender ſkin, having a hole like the yard of a man, but not thro', in which, and the bigneſs of it, it only differs.

The next thing is the paſſage of the urine, which is under the clitoris, and above the neck of the womb, ſo that the urine of a woman comes not through the neck of the womb, neither is the paſſage common as in men, but particular, and by itſelf. This paſſage opens itſelf into the fiſſure to evacuate the urine; for the ſecuring of which from cold, or any other inconvenience, there is one of the four caruncles, or fleſhy knobs, placed before it, which ſhuts up the paſſage. —For theſe knobs, which are in number four, and in reſemblance like myrtle berries, are placed behind the wings before ſpoken of, quadrangularly, one againſt the other. Theſe are round in virgins, but hang flagging when virginity is loſt.—'Tis the uppermoſt of theſe that nature has placed for the ſecuring the urinary paſſage from cold; and which is therefore largeſt and forked for that end.

The lips of the womb that next appear, cover the neck thereof, but being ſeparated diſcloſe it; and then two things are to be obſerved, and theſe are the neck itſelf, and the hymen, more properly called the Clauſtrum Virginale, which I ſhall treat more at large when I come to ſhew what virginity is. The neck of the womb, I call the channel, is between the fore-mentioned knobs and the inner bone of the womb, which receives the man's yard like a ſheath; and that it may be dilated with the more eaſe and pleaſure in the act of coition,

it is sinewy and a little spongy; and there being in this concavity divers folds or orbicular plates made by tunicles, which are wrinkled, it forms an expanded rose that may be seen in virgins; but in those that have used copulation, it comes by degrees to be extinguished; so that the inner side of the neck of the womb appears smooth, and in old women it becomes more hard and grisly. But though this channel be sinking down, wreathed and crooked, yet it is otherwise in the time of copulation; as also when women are under the monthly purgation, or in labour, being then very much extended, which is a great cause of their pains.

The Claustrum Virginale, commonly called the Hymen, is that which closes the neck of the womb; for between the duplicity of the two tunicles which constitute the neck of the womb, there are many veins and arteries running along that arise from the vessels of both sides of the thighs, and so pass into the neck of the womb, being very large; and the reason thereof is, because the neck of the womb requires to be filled with abundance of spirits to be dilated thereby, that it may the better take hold of the penis, such emotions requiring great heat, which being more intent by the act of friction, consumes a great deal of moisture, in the supplying of which large vessels are very necessary: hence it is that the neck of the womb in women of reasonable stature, is eight inches in length. But there is also another cause of the largeness of these vessels, because their monthly purgations make their way through them: and though the womb be shut up, yet the passage in the neck of the womb, through which these vessels pass, is open. And therefore, as soon as you penetrate the pudendum, there may be seen two little pits or holes, and in which are contained an humour, which, by being pressed out in the time of coition, does greatly delight the fair sex.

I shall, in the next place, proceed to a description of the womb, which is the field of generation, without which nothing can be done. The parts we have been speaking of being ordained by nature to convey the seed to the womb, which being impregnated therewith, by virtue of that plastic power of nature, produces its own likeness.

The womb is situated in the lower parts of the hypogastrion, being joined to its neck, and is placed between the bladder and the straight gut, so that it is kept from swaying or rolling; yet hath its liberty to stretch and dilate itself, and also to contract itself, according as nature in that case disposes it. It is of a round figure, somewhat like a gourd; lessening and growing more acute towards one end, being knit together by its proper ligaments, and its neck joined by its own substance, and certain membranes that fasten it to the Os Sacrum and the share bone. It is very different, with respect to its largeness in women, especially between such as have had children, and those that have had none. It is so thick in substance that it exceeds a thumb's breadth; and after conception, augments to a greater proportion, and to strengthen it yet more, it is interwoven with fibres overthwart, both straight and winding; and its proper vessels are veins, arteries and nerves; amongst which are the two little veins which pass from the spermatic vessels to the bottom of the womb, and two bigger from the hypogastrics, touching both the bottom and neck, the mouth of these veins piercing so far as the inward concavity.

The womb, besides what I have already mentioned, hath two arte-

ries on both ſides the ſpermatic veſſels and the hypogaſtrics, which ſtill accompany the veins, with ſundry little nerves, knit and interwoven in the form of a net, which are alſo extended throughout, even from the bottom to the pudenda themſelves, being ſo placed chiefly for the ſenſe of pleaſure, ſympathetically moving from the head and womb.

Here the reader ought to obſerve, that two ligaments hanging on either ſide of the womb, from the ſhare-bone, piercing through the Peritonæum and joining to the bone itſelf cauſes the womb to be moveable, which upon divers occaſions either falls low or riſes; the neck of the womb is of a moſt exquiſite ſenſe, ſo that if it be at any time diſordered, either with a ſchirroſity, too much hot moiſture, or relaxation, the womb is ſubject to barrenneſs. In thoſe that are near their delivery, there uſually ſtays a moſt glutinous matter in the entrance, to facilitate the birth; for at that time the mouth of the womb is opened to a wideneſs in proportion to the bigneſs of the child.

Under the parts belonging to generation in women, are alſo comprehended the preparatory or ſpermatic veſſels; the preparatory veſſels differ not in number from thoſe in man, for they are likewiſe four, two veſſels and two arteries; their riſe and original is the ſame as in man, on the ſide of them are two arteries which grow from them, differing only in their ſize and manner of inſertion, the right vein iſſuing from the trunk of the hollow vein, and the left from the emulgent vein; and on the ſide of them are two arteries which grow from the arcata. Theſe preparatory veſſels are ſhorter in women than in men, becauſe they have a ſhorter paſſage, the ſtones of a woman lying within the belly, but thoſe of a man without; but to make amends for their ſhortneſs, they have far more writhings to and fro, in and out, than they have in men, that ſo the ſubſtance they carry may be the better prepared;——neither are they united as they are in men, before they come to the ſtones, but are divided into two branches, whereof the greater only paſſeth to the ſtones, but the leſſer to the fecundated egg, and this is properly called conception. And then, ſecondly, to cheriſh and nouriſh it, till nature has framed the child and brought it to perfection. Thirdly, It ſtrongly operates in ſending forth the birth, when its appointed time is accompliſhed, there dilating itſelf in an extraordinary manner; and ſo aptly removed from the ſenſes, that no injury accrues to it from thence, retaining in itſelf a ſtrength and power to operate and caſt forth the birth.

The uſe of the preparatory veſſels is to convey the blood to the teſticles, of which a part is ſpent in the nouriſhment of them, and the production of theſe little bladders in all things reſembling eggs, through which the vaſa Præparanta run, and are obliterated in them. This conveyance of blood is by the arteries, but as for the veins, their office is to bring back what blood remains from the fore-mentioned uſe.

The veſſels of this kind are much ſhorter in women than men, by reaſon of their nearneſs to the teſticles; and yet that defect is more than made good by the many intricate windings to which they are ſubject; for in the middle way they divide themſelves into two branches of different magnitude; for, one of them being bigger than the other, paſſes to the teſticles.

The teſticles in women are very uſeful; for where they are defective, generation work is quite ſpoiled; for though theſe little bladders

which are on their outward ſuperfices contain nothing of ſeed, as the followers of Galen, &c. erroneouſly imagine, yet they contain ſeveral eggs (about the number of 20 in each teſticle) one of which being impregnated by the moſt ſpirituous part of the man's ſeed in the act of coition, deſcends through the oviducts into the womb, where it is cheriſhed till it becomes a live child. The figure of theſe Ovæ or eggs, is not altogether round, but a little flat and depreſſed on the ſides, and in their lower part oval; but where the blood veſſels enter them, that is in the upper part, they are more plain, having but one membrane about them that the heat may have more eaſy acceſs to the womb, both to the nouriſhment of itſelf and of the infant therein. Let me further add, theſe ſpermatic veins receive the arteries as they paſs by the ſide of the womb, and thereby make a mixture of the vital and natural blood, that their work be more perfect. The deferentia, or carrying veſſels ſpring from the lower part of the ſtones, and are in colour white, ſubſtance ſinewy, and paſs not to the womb ſtraight, but wreathed; they proceed from the womb in two parts, reſembling horns, whence they are called the horns of the womb.

The ſtones of women are another part belonging to the inſtruments of generation; for ſuch things they alſo have as well as man, but they are alſo differently placed: neither is their bigneſs, temperament, ſubſtance, form, or covering the ſame. As to their place, it is the hollowneſs of the abdomen, reſting upon the muſcles of the loins and ſo not pendulous, as in man. And that they are ſo placed is, that by contracting the heat, they may be the more fruitful, their office being to contain the ovem, or egg, which being impregnated by the ſeed of the man, is that from which the embryo is engendered. Theſe ſtones differ alſo from men's in their form; for, though they are ſmooth in men, they are uneven in women; being alſo depreſſed or flattiſh in them, though in men their form is more round and oval. They have alſo in women but one ſkin, whereas in men they have four, Nature having wiſely contrived to fortify thoſe moſt againſt the injuries of the air, that are moſt expoſed to it; the ſtones of women being within, but thoſe of men without the belly. They differ alſo in their ſubſtance, being much more ſoft than thoſe of men, and not ſo well compacted: their bigneſs and temperature differ, in that they are leſs and colder than thoſe of men. Some indeed will have their uſe to be the ſame as in men, but that is for want of judgment; for Ariſtotle and Scotus both affirm, that the women have no ſeed, and that their ſtones differ alſo in their uſe from thoſe of men; their uſe being as I have already ſaid, to contain that egg which is to be impregnated by the ſeed of a man.

It now remains, that I ſay ſomething of the ejaculatory veſſels which have two obſcure paſſages, one on either ſide, which in ſubſtance differ nothing from the ſpermatic veins. They riſe in one part from the bottom of the womb, but not reaching from the other extremity, either to the ſtones, or any other part are ſhut up, and incapable, adhering to the womb, as the colon doth to the blind gut, and winding half-way about: though the ſtones are remote from them, and touch them not, yet they are tied to them by certain membranes reſembling the wings of a bat, through which certain veins and arteries, paſſing from the end of the ſtones, may be ſaid here to have their paſſages, proceeding from the corners of the womb to the teſti-

cles, and are accounted the proper ligaments by which the teſticles and the womb are united and ſtrongly knit together.

Thus the women's ſecrets I have ſurvey'd,
And let them ſee how curiouſly they're made,
And that, though they of different ſexes be,
Yet on the whole they are the ſame as we,
For thoſe that have the ſtricteſt ſearchers been,
Find women are but men turn'd outſide in:
And men, if they but caſt their eye about,
May find they're women with their inſide out.

SECTION III.

Of the Uſe and Action of the ſeveral Parts in Women appropriated to Generation.

I SHALL next take a ſurvey of the parts of generation both in men and in women, and ſhew the uſe and action of theſe parts in the work of generation, which will excellently inform us that nature has made nothing in vain.

The external parts in women's privities, or that which is moſt obvious to the eye at firſt, commonly called Pudendum, are deſigned by nature to cover the great orifice, nature intending that orifice to receive the Penis or yard in the act of coition, and alſo to give paſſage to the urine, and at the time of birth to the child. The uſe of the wings or knobs, like myrtle berries, are for the ſecurity of the internal part, by ſhutting up the orifice and neck of the bladder, alſo for delight and pleaſure; for by their ſwelling up, they cauſe titilation and delight in thoſe parts, being preſſed by the man's yard. Their uſe is likewiſe to obſtruct the involuntary paſſage of the urine.

The uſe and action of the clitoris in women is like that of the penis or yard in men, that is, erecting its extreme end, being like that of the glands in men, the ſeat of the greateſt pleaſure in the act of copulation, ſo is this of the clitoris in women, and therefore called the ſweetneſs of love and the fury of venery.

The action and uſe of the neck of the womb, is the ſame with that of the Penis, that is, erection which is occaſioned ſundry ways; for, Firſt, in copulation it is erected and made ſtraight for the paſſage of the Penis to the womb. Secondly, while the paſſage is replete with the ſpirits and vital blood, it becomes more ſtraight for embracing the penis. And for the neceſſity of erection there is a two fold reaſon; one is, that if the neck of the womb was not erected, the yard could have no convenient paſſage to the womb. The other is, that it hinders any hurt or damage that might enſue through the violent concuſſion of the yard, during the time of copulation.

Then, as to the veſſels that paſs through the neck of the womb, their office is to repleniſh it with blood and ſpirits, that, ſo as the moiſture conſumes through the heat contracted in copulation, it may ſtill by theſe veſſels be renewed. But their chief buſineſs is to convey nutriment to the womb.

Thus Nature nothing does in vain produce,
But fits each part for what's its proper uſe;
And though of different ſexes form'd we be,
Yet betwixt thoſe there is that unity,

That we in nothing can a greater find,
Unless the soul that's to the body join'd;
And sure in this Dame Nature's in the right,
The strictest union yields the most delight.

CHAP. II.

Of the Restriction laid upon Men in the use of Carnal Copulation, by the institution of Marriage, with the Advantage that it brings to Mankind and the proper time for it.

THOUGH the great Architect of the world has been pleased to frame us of different sexes, and, for the propagation and continuation of mankind, has indulged us the mutual embraces of each other, the desire whereof, by a powerful and secret instinct, is become natural to us, yet he would leave them to the law of the Creator, who has ordained that every man shall have his own wife; and, though, since man, by sinning against his Creator, hath fallen from his primitive purity, and has multiplied wives and concubines, by which the first institution's violated, and the grossest affront given to the Divine Law-giver; for the holy Jesus hath told us, That in the beginning marriage was of one man to one woman: so that as these conjugal delights cannot be enjoyed but in a married state, so neither, in that state, can they lawfully be participated of with more than one wife. And it is the breaking of this order that has filled the world with confusion and debauchery; has brought diseases on the body, consumption on estates, and eternal ruin to the soul, if not repented of. Let all those, therefore, of either sex, that have a desire to enjoy the delights of mutual embraces, take care that they do it in a married state, with their own wives or husbands, or else it will become a curse to them instead of a blessing: And, to that end let them consider what is due to the transgressors of his law, who hath said, *Thou shalt not commit Adultery.* Whatever is spoken of the venereal pleasures, is spoken to those who have, or may have, a right thereunto, by being in a married state. For,

Who to forbidden pleasures are inclin'd,
Will find at last they leave a sting behind.

SECTION II.

Of the Happiness of the Married State.

Matrimony, in the present age, is looked upon as a most insupportable yoke: Wives and husbands are accounted the greatest clogs and burthens to those who give up the reins to their unbridled appetites. Notwithstanding the present mode of thinking is against me, I doubt not of making it appear that a married state is the most happy condition, (where persons are equally yoked) that is to be enjoyed on this side Heaven.

The author and institutor of marriage, and who first brought man and woman together, was no other than he that made them, even the Great Lord of the universe, whose wisdom being infinite, could not but know what condition was good for us; and his goodness being equal to his wisdom, sufficiently shews the end of this institution was the happiness of the creature he had made; and indeed man could not be happy without it; for he saw that it was not good that man should be alone, and therefore made a woman to complete his happiness, which was not perfect whilst he wanted such a help mate for him.

The time of the inſtitution is alſo very remarkable: for it was whilſt Adam and his new-made bride were clothed with all that virgin purity and innocence with which they were created, before they had entertained the leaſt converſe with the temper, or had given way to one diſordered thought; and yet could curiouſly ſurvey the ſeveral incomparable beauties and perfections of each other without ſin, and knew not what it was to luſt. It was at this time that the Creator united Adam in the holy bands of wedlock.

'Twas in paradiſe where the firſt match was made; and which could ſcarcely have been paradiſe without it; for paradiſe is known to be a place of pleaſure, wherein they were ſurrounded with the quinteſſence of all delights; where there was nothing wanting that might pleaſe the eye, charm the ear, or gratify the taſte; and yet Adam was not happy with theſe pleaſing ſweets till he enjoyed his eve; ſo that it was a married ſtate which completed his happineſs, and which was a paradiſe of pleaſure itſelf.

What an addition to happineſs a good wife makes! ſuch a one is the beſt companion in proſperity, and in adverſity the ſureſt friend; the greateſt aſſiſtance in buſineſs, the only lawful and comfortable means by which he can have iſſue, and the great remedy againſt incontinence; and if we believe king Solomon, The greateſt honour unto him that has her. For he tells us She is a *crown to her huſband.* Surely theſe are not ſmall advantages!

If married perſons would be careful to do their reſpective duties, there would be but little complaining; nor would any condition in life be ſo agreeable as the married ſtate. How much more ſatisfaction a man receives in the embraces of a loving wife, than in the wanton dalliances of a deceitful harlot.

Thus does this ſection unto all relate
The pleaſures that attend the married ſtate:
And ſhews it does with innocence conſiſt;
And that ſo many have thoſe pleaſures miſs'd,
'Tis their own fault, they will no wiſer be,
As in this mirror they may plainly ſee.

SECTION III.

At what age young Men and Virgins are capable of carnal copulation; and why they ſo much deſire it.

I ſhall in the preſent ſection, make it my buſineſs to ſhew at what age young men and virgins are capable of the marriage bed, which becauſe ſo many deſire before they attain to it, it will likewiſe be neceſſary to ſhew the cauſe of their impetuous deſires.

The inclination of virgins to marriage is to be known by many ſymptoms: for, when they arrive at ripe age, which is about fourteen or fifteen, their natural purgations begin to flow; and then the blood which no longer ſerves for the increaſe of their bodies, does, by its abounding, ſtir up their minds to venery: to which alſo external cauſes may incite them. For their ſpirits are briſk and inflamed when they arrive at this age, and their bodies are often more heated by their eating ſharp and ſalt things; and by ſpices, by which their deſire of venereal embraces becomes very great, and, at ſome critical junctures almoſt inſupportable. The uſe of thoſe ſo much deſired

enjoyments being denied to virgins, is often followed by very dangerous, and sometimes dismal consequences, precipitating them into those follies that may bring an indelible stain on their families, or bring on themselves the Green Sickness, or other diseases. But when they are married and those desires satisfied by their husbands, these distempers vanish, and their beauty returns more gay and lively than before. And this strong inclination of theirs may be known by their eager gazing at men, and affecting their company, which sufficiently demonstrates that nature excites them to desire coition. Nor is this the case with virgins only, but the same may be observed in young widows, who cannot be satisfied without that due benevolence which they were wont to receive from their husbands.

At fourteen years of age, commonly, the menses begin to flow in virgins; at which time they are capable of conceiving, and therefore fit for marriage: though it would be much better both for themselves and their children, if they would not marry till eighteen or twenty; if they are healthy, of strong body, and use themselves to temperance, they may continue bearing till upwards of 50 though generally they leave off between 40 and 50: for the menses flow longer in some than in others: but when they cease, they cease bearing. And therefore Sarah bearing Isaac after it had ceased to be with her according to the custom of women, may be well termed miraculous.

As for male youth, when they arrive at 16, or between that and 17; having much vital strength, they may be capable of getting children; which ability, by the force and heat of procreating matter, constantly increases till 45, 56, 65, and then begins to flag, the seed by degrees becoming unfruitful, the nature spirits being extinguished, and the heat dried up. Thus it is with them for the most part, but many times it falls out otherwise in particular instances; as once in Sweden a man was married at 100 years old to a bride of 30, and had many children by her; but he was a man of so hale a constitution, and carried his age so well, that strangers would not have guessed him at above 60. And in Campania, where the air is clear and temperate, it is usual for men of 80 years old to marry young virgins, and have children by them: which shews that age in man hinders not procreation unless they be exhausted in their youth, and their yards shrivelled up.

If any ask, why a woman is sooner barren than a man?—let such know that the natural heat, which is the cause of generation, is more predominant in men than women; for the monthly purgations of women shew them to be more moist than men, and so does also the softness of their bodies. And the man exceeding her in native heat, concocts the humours into proper aliment, by the benefit whereof they are elaborated into seed: but woman though of a finer make, yet not being so strong as men, their faculties are thereby hindered in their operation.

Thus nature to her children is so kind,
That early they those inclinations find,
Which prompts them on to propagate the kind.
Hence 'tis a virgin her desires can't smother,
But restless is till she be made a mother.

CHAP. III.

Of Virginity, what it is, how it may be known, by what means it may be loſt, and how a perſon may know that it is ſo.

SECTION I.

Of Virginity, and wherein it conſiſts.

HAVING treated of the deſire young men and virgins have to mutual embraces, and at what age they are fit for them; I have alſo ſhewn that thoſe pleaſures are only lawful to be enjoyed in a married ſtate; and have alſo acquainted the reader with the advantage of ſuch a condition. But ſince the deſires of many after mutual embraces are ſo impetuous that not having an opportunity to enter into a married ſtate, they have anticipated the pleaſures of matrimony, and loſt their virginity beforehand; and yet, perhaps, have afterwards pretended to bring their virginity to a marriage bed, by which means many an honeſt man has been deceived, and meretricious woman eſcaped with impunity: and, on the other hand, ſome virtuous young virgins, that have come ſuch to their huſbands' beds, have been accuſed by the ignorance and credulity of their huſbands, to have loſt their virginity before hand, when there has been no ſuch matter; therefore to do right in this caſe to both parties, my deſign in this chapter is to ſhew what virginity is, and wherein it conſiſts: how many ways it may be loſt, and how a man may know that it is ſo or not: that ſo women may not be wrongfully cenſured, or men impoſed upon.

Virginity untouched and taintleſs, is the boaſt and pride of the fair ſex; but they generally commend it to put it off: For, as good as it is, they care not how ſoon they are honeſtly rid of it. And I think they are in the right of it, for if kept it grows uſeleſs, or at leaſt loſes ſo much of its value; a ſtale virgin (if ſuch a thing there be) being looked upon like an old almanack, out of date. But to ſpeak to the purpoſe, virginity is the chief, the prime, the beſt of any thing, and is properly the integrity of a woman's privities, not violated by man, or not known by him: it being the diſtinguiſhed characteriſtic of a virgin, that ſhe has not known man.

To make this more plain, I muſt here obſerve, that there is in maids, in the neck of the womb, a membraneous production called the Hymen, which is like the bud of a roſe half blown, and this is broken in the firſt act of copulation with man: and hence comes the word *Deflora*, to deflower; whence the taking of virginity, is called deflowering of a virgin: for when the roſe bud is expanded, virginity is loſt. Certain it is, there is in the firſt act of copulation ſomething that cauſes pain and bleeding; which is an evident ſign of virginity. But what this is authors are not agreed on. Some ſay it is a nervous membrane, or thin ſkin with ſmall veins, that bleeds at the firſt penetration of the yard. Others ſay it is the four caruncles, knobs, or little buds like myrtle berries, which are plump and full in virgins, but hang looſe or flaggy in thoſe who have uſed copulation, being preſſed by the yard. Some have obſerved the fleſhy circle about the Nymphæ, or neck of the womb, with little obſcure veins, which make the membrane not to be nervous but fleſhy. But ſetting aſide conjectures, the Hymen, or Clauſtrum Virginale, is a thin membrane interwoven with fleſhy fibres, and endowed with many little arteries and veins, ſpread acroſs

the paſſage of the vagina, behind the inſertion of the bladder, with a hole in the midſt for the menſes to flow, ſo big that it will admit of the top of one's little finger. This is that which is called the Zone, or girdle of chaſtity; and where it is found in the form deſcribed, it is a certain note of virginity; but in the firſt act of copulation it is neceſſarily violated, and then it is generally accompanied with an effuſion of blood, which blood is called the flower of virginity; and when it is once broke it never cloſes again.

SECTION II.

How virginity may be loſt.

In the former ſection I have ſhewn in what virginity conſiſts, and that it is loſt by the firſt penetration of the yard, which may be eaſily known by its being attended with an effuſion of blood upon the rupture of the Hymenial membrane, or Clauſtrum Virginale; but I muſt do the fair ſex this juſtice, to let the world know, that although wherever this is found, it is an undoubted token of virginity, yet it will not follow, that where this token is wanting, virginity is deflowered; for the Hymen may be corroded by acrimonious and fretting humours flowing through it with the menſes, or it may be violated by the inverſion or falling out of the uterus, or of the vagina or ſheath, which ſometimes happens even to virgins; or (which all virgins ſhould beware of, for the preſervation of their credit, and preventing of ſuſpicion) perhaps the unwary bride has had her menſes but a day or two before, in which caſe both the Hymen and inner wrinkled membranes of the vagina are flaggy, weak and relaxed, ſo that no ſuch rupture or effuſion may happen. It were better therefore, that when virgins are about to marry, they would fix their wedding-day at leaſt ſix or ſeven days after the menſes have done flowing.

But further, nature hath given greater deſires after enjoyment to ſome than to others, and ſuch, though they abſtain from enjoyment, yet ſo great is their deſire after it, that they may break the Hymen or Glauſtrum Virginale; and ſometimes it itches to that degree, that they put in their finger, and ſo break it. Sometimes the midwives break it in the birth; and ſometimes it is done by ſtoppage of urine, coughing, violent ſtraining, or ſneezing; ſo that no bleeding at the firſt penetration of the huſband, is not always a ſign of unchaſtity, or that another has been there before him, ſeeing that the Hymenial membrane may be broke ſo many other ways: but where bleeding does flow, it is an undeniable token that the perſon was a virgin, and never knew man before. And indeed, though the Hymen may be broke all theſe ways mentioned, yet it ſo rarely happens to be broke any other way, that Leo Africanus makes mention of it as a general cuſtom of the Africans at their weddings, that, the marriage ceremony being over, the bride and bridegroom are ſhut up in a chamber, while the wedding dinner is preparing; an ancient woman ſtands at the door to receive from the bridegroom a ſheet, having the bloody token of the wife's virginity, which ſhe ſhews in triumph to all the gueſts, and then they feaſt with joy; but if there is no blood ſeen, the bride is to be ſent home again to her friends with diſgrace, and the diſappointed gueſts go home without their dinner.

There are others that make the ſtraightneſs of the privities a ſign of virginity, but this is a very uncertain rule; for this depends much

upon the age, habit of the body, and other circumſtances. But, though women who have uſed carnal copulation, are not ſo ſtraight as virgins, yet this cannot be a certain argument of virginity becauſe the privities may be made ſtraight by the uſe of aſtringent medicines. I have heard of a courtezan, who though ſhe had been married, gave herſelf out to be a virgin, and by the help of a bath of comfry roots, deceived thoſe with whom ſhe had to do.

Others judge of loſt virginity, by milk in the breaſt; but ſuch, perhaps are ignorant that there is a twofold milk; the one of virgins, the other of ſuch as have conceived or brought forth children: that of virgins is a malady contrary to nature, made of blood from the womb; turned into milk by the faculty of the breaſts; the other is natural, where there is a child either in the womb or born; yet the milk, though both are white, differs very much, both in reſpect to the blood, and diverſity of veins that bring it to the breaſts: and that of virgins is thinner, leſs in quantity and not ſo ſweet: therefore if virgins happen to have ſuch milk, they are not for that reaſon to be reckoned unchaſte.

Upon the whole, the ſum of what I have ſaid upon this head of virginity terminates in this; that when a man is married, and finds the tokens of his wife's virginity, upon the firſt act of copulation, he has all the reaſon in the world to believe her ſuch: but if he finds them not, he has not reaſon to think her devirginated, if he finds her otherwiſe ſober and modeſt; ſeeing the Hymen may be broken ſo many other ways, and yet the woman both chaſte and virtuous. Only let me caution virgins to take all imaginable care to keep their virgin zone entire, that ſo when they marry, they may be ſuch as the great Cæſar wiſhed his wife to be, not only without fault, but without ſuſpicion alſo.

Thus have I virgin innocence ſurvey'd,
And ſhew'd the difference betwixt wife and maid,
And that their chaſtity they need not fear,
Whoſe virgin token plainly doth appear,
Nor cenſure thoſe in whom they do not ſo,
Unleſs the contrary they plainly know,
For they may yet unſpotted virgins be,
Although their virgin tokens none can ſee.

Ariſtotle's Maſter-Piece.

PART II.

The ſecrets of nature diſplayed in the Production of Man.

CHAP. I.

What conception is; what is pre-requiſite thereunto; how a woman may know whether ſhe hath conceived, and whether a boy or a girl.

SECTION I.

Of Conception, what it is, &c.

HAVING, in the firſt part of this work, deſcribed the inſtruments of generation in both ſexes, and the uſe for which thoſe inſtruments were intended by nature, I ſhall, in the part before me proceed to ſhew what conception is; the ſigns and tokens thereof, and what are the pre-requiſites thereunto: for when once a woman has conceived the work of generation is begun, time, with nature's help, will perfect the work.

Now in conception, that which is firſt to be regarded, and without which it cannot be, is the ſeed of the man, that being the active principle, or efficient cauſe of the fœtus, the matter of which is arterial blood, and animal ſpirits, which are elaborated into ſeed in the teſticles, and from thence by proper veſſels conveyed into the yard, and in the act of copulation, it is injected or emitted into the womb. The next thing is the paſſive principle of the fœtus (for there muſt be both in order to conception) and this is an ovum, or egg, impregnated by the man's ſeed, or being conveyed to it, the womb cloſes up, that no air may enter therein, but the impregnated ovum may ſwell into a fœtus. This is that which is truly and properly conception, and the pre-requiſites thereunto I ſhall make the ſubject of the next ſection.

SECTION II.

Of the Pre-requiſites to Conception.

I have ſhewn in the former ſection, that there are two things to be regarded chiefly in conception, to wit, the active and paſſive principle. This in part ſhews, that difference of ſexes is a pre-requiſite to conception. So nature has ordained, there muſt be a proper vehicle for the active principle to be injected thereinto, and there muſt alſo be a paſſive principle to be impregnated thereby, ſo the woman has no active principle to impregnate, and therefore, without different ſexes, there can be no conception.

But this is not all: for it is not enough that there be different ſexes, but theſe different ſexes muſt unite, and there muſt be coition in order to conception; and it is coition, or the mutual embraces of both ſexes, which nature has made ſo deſirable to each other; which when authoriſed in the way that heaven has ordained, there is no need of raviſhing; for the fair bride will quickly meet her bridegroom with equal vigour. But ſince in that there may be overdoing, and ſuch errors committed by their giving way to the impetuoſity of their deſires, as may be prejudicial to conception, it will not be amiſs to give ſome directions to make this operation the more effectual.

Section III.

A Word of Advise to both Sexes: or, Directions respecting the Act of Coition or carnal Copulation.

Though there are some that desire not to have children, and yet are very fond of nocturnal embraces, to whom these directions will be no way acceptable, because it may probably produce those effects which they had rather be without; yet I doubt not but the generality of both sexes, when in a married state have such a desire to produce the fair image of themselves, that nothing can be more welcome to them than those directions that may make their mutual embraces most effectual to that end: and therefore let none think it strange that we pretend to give directions for the promoting that which nature itself teacheth all to perform; since 'tis no soleciſm for art to be a handmaid to nature, and to assist her in her noblest operations. Neither is it the bare performing of that act which we here direct to, but the performing it so as to make it conducive unto the work of generation. And since this act is the foundation of generation, and without which it cannot be, some care ought to be taken, and consequently, some advice given how to perform it well: and therein I am sure the proverb is on our side, which tells us, that what is once well done, is twice done. But yet what we shall advance on this nice subject, shall be offered with such caution, as not to give offence to the chastest ear, nor put the fair sex to the trouble of blushing. What I shall offer will consist of two parts. First, something previous to it; and secondly, something consequential to it.

For the first, when married persons design to follow the propensions of nature for the production of the fair image of themselves, let every thing that looks like care and business be banished from their thoughts, for all such things are enemies to Venus; and let their animal and vital spirits be powerfully exhilerated by some brisk and generous restoratives; and let them, to invigorate their fancies, survey the lovely beauties of each other, and bear the bright ideas of them in their minds: and if it happens, that instead of beauty there is any thing that looks like imperfection or deformity (for nature is not alike bountiful to all) let them be covered over with a veil of darkness, and oblivion. And since the utmost intention of desire is required in this act, it may not be amiss for the bridegroom for the more eager heightening of this joy, to delineate the scene of their approaching happiness to his fair languishing bride, in some such amorous rapture as this.

Now, my fair bride, now will I storm the mint
Of love and joy, and rifle all that's in't.
Now my infranchis'd hand on ev'ry side,
Shall o'er thy naked polish'd ivory slide,
Freely shall now my longing eyes behold,
Thy bared snow, and thy undrain'ned gold:
Nor curtain now, though of transparent lawn,
Shall be before thy virgin treasure drawn.
I will enjoy thee now, my fairest; come,
And fly with me to love's elysium,
My rudder with thy bold hand, like a try'd
And skilful pilot, thou shalt steer and guide,

My bark in love's dark channel, where it shall
Dance, as the bounding waves do rise and fall;
Whilst my tall pinnace in the Cyprian straight,
Rides safe at anchor, and unlades the freight.

Having by these, and other amorous acts (which love can better dictate than my pen) wound up your fancies to the highest ardour and desires,

Perform those rites nature and love requires,
Till you have quench'd each others am'rous fires.

When the act of coition is over, and the bridegroom has done what nature prompted him to do, he ought to take care not to withdraw too precipitately from the field of love, lest he should, by so doing, let the cold into the womb, which might be of dangerous consequence. But when he has given time for the matrix to close up, he may withdraw, and leave the bride to her repose, which ought to be with all the calmness possible, betaking herself to rest on the right side, and not removing without great occasion, till she has taken her first sleep. Coughing and sneezing, if possible should be avoided, or any thing that agitates or causes a motion of the body. These amorous engagements should not be often repeated till the conception is confirmed. And it may not be amiss to remind the bridegroom, that the fair lasts all the year, and that he should be careful not to spend his stock lavishly, as women, in general, are better pleased in having a thing once well done, than often ill done.

SECTION IV. *How a Woman may know when she has conceived.*

After the means made use of in order to conception, according to the directions given before, there is reason to expect that conception should follow: but as things do not always succeed according to desire, so therefore conception does not always follow upon coition. For there are many women, especially those newly married, who know not whether they have conceived or not, after coition; which, if they were assured of, they might and would avoid several inconveniencies which they now run upon. For, when after conception a woman finds an alteration in herself, and yet knows not from whence it arises, she is apt to run to the doctor, and inquire of him what is the matter, who not knowing that she is with child, gives her a strong potion, which certainly destroys the conception. There are others, who out of foolish bashful coyness, though they know that they have conceived, yet will not confess it, that they may be instructed how to order themselves accordingly. Those that are coy may learn in time to be wise; and for the sake of those that are ignorant, I shall set down the signs of conception that women may know thereby, whether they have conceived or not.

If a woman hath conceived, the vein under her eye will be swelled, *i. e.* under the lower eyelid, the vein in the eyes appearing clearly, and the eyes something discoloured; if the woman hath not her terms upon her, nor hath watched the night before, there is a certain sign of her having conceived; and this appears most plainly just upon the conception, and holds for the first two months after.

Stop the urine of the woman close in a glass or bottle three days, at the expiration of which time strain it through a linen rag; if you perceive small living creatures in it, you may instantly conclude that she hath conceived; for the urine, which was before part of her own substance, will be generative as well as its mistress.

A coldneſs and chilneſs of the outward parts after copulation, ſhews a woman to have conceived, the heat being retired to make the conception; and then the veins of the breaſts are more clearly ſeen than they were before. The tops of the nipples look redder than formerly: the body is weakened, and the face diſcoloured, the belly waxeth very fat, becauſe the womb cloſeth itſelf together to nouriſh and cheriſh the ſeed. If ſhe drinks cold water a coldneſs is felt in the breaſt; ſhe has alſo loſs of appetite, ſour belchings, and exceeding weakneſs of the ſtomach; the breaſts begin to ſwell, and wax hard, not without pain or ſereneſs; wringing or griping pains like the cramp, happens in the belly above the navel; alſo divers appetites and longings are engendered. The veins of the eyes are alſo clearly ſeen, and the eyes ſeem ſomething diſcoloured, as a looking glaſs will ſhew. The excrements of the guts are voided painfully, becauſe the womb ſwelling, thruſteth the right gut together: likewiſe let her take a green nettle and put it into her urine, cover it cloſely, and let it remain all night: if ſhe is with child it will be full of red ſpots on the next morning, if ſhe is not with child it will be blackiſh.

By theſe experiments, ſome of which never fail, a woman may know whether ſhe hath conceived or not, and to regulate herſelf accordingly. For,

When women once with child conceived are,
They of themſelves ſhould take eſpecial care.

SECTION V.

How to know whether a Woman be conceived of a male or female child.

In the preſent ſection I ſhall endeavour to gratify the curioſity of many perſons who are very deſirous to know whether they are conceived of a male or female. For the ſatisfaction of ſuch, I ſhall give the ſign of a male child being conceived, and the reverſe thereof that of a female.

It is then a ſign of a male child, when the woman feels it firſt on the right ſide; for male children lie always on that ſide of the womb, the woman alſo when riſing from her chair, doth ſooner ſtay herſelf upon the right hand than on the left. Alſo the belly lies rounder and higher than when it is a female. The colour of the woman it not ſo ſwarthy, but more clear than when it is a girl. The right ſide is likewiſe more plump and harder than the left, the right nipple redder. She likewiſe breeds a boy eaſier and with leſs pain than a girl, and carries her burthen not ſo heavily, but is more nimble and ſtirring.

I will only, as to this, add the following experiments, which I never knew fail. If the circle under the woman's eyes, which is of a wan blue colour, be more apparent under the right eye, and that moſt diſcoloured, ſhe is with child of a boy; if the mark be moſt apparent in her left eye, ſhe is with child of a girl. The other is, let her drop a drop of her milk in a baſon of fair water, if it ſinks to the bottom as it drops in, round in a drop, it is a girl ſhe is with child of; for if it be a boy it will ſpread and ſwim at top. This I have often tried, and it never failed.

For whether male, or female child it be
You have conceived, by theſe rules you'll ſee.

CHAP. II.

SEC. I. *How a Woman ſhould order herſelf in order to conception.*

I AM very well ſatisfied that many women deſired copulation, not from any delight or ſatisfaction they take therein, more than as it is the means appointed by Him, that bids us increaſe and multiply, for the obtaining of children, and the propagation of mankind. And though ſeveral make uſe of coition to obtain that end, yet we find by experience, that in many, it does not ſucceed, becauſe they order not themſelves as they ought to do; for, though it muſt be granted, that all our endeavours depend upon the divine bleſſing, yet if we are wanting in any thing to ourſelves, how can we expect that bleſſing to ſucceed our endeavours? My buſineſs therefore in this ſection ſhall be to ſhew how women that deſire to have children ſhould order themſelves.

Firſt, women that are deſirous to have children, muſt, in order thereunto, give themſelves to moderate exerciſe: for want of exerciſe, and idleneſs, are very great enemies to the work of generation, and indeed are enemies both to ſoul and body. Thoſe that ſhall give themſelves the trouble to obſerve it, will find thoſe city dames that live high, and do nothing, ſeldom have children, or if they have, they ſeldom live; whereas, thoſe poor women that accuſtom themſelves to labour, have many children, and thoſe ſtrong and luſty. Nor need we wonder at it, if we conſider the benefit that comes by a moderate exerciſe and labour; for it opens the pores, quickens the ſpirits, ſtirs up the natural heat, ſtrengthens the body, ſenſes, and ſpirits, comforts the limbs, and helps nature in all her exerciſes, of which procreation of children is none of the leaſt.

Secondly, women in order to conception, ſhould avoid all manner of diſcontent, and the occaſion of it; for diſcontent is a great enemy to conception, and it ſo diſpirits either man or woman, that it hinders them from putting forth that vigour, which ought to be exerted in the act of coition. When on the contrary, content and ſatisfaction of mind dilate the heart and arteries, whereby the vital blood and ſpirits are freely diſtributed throughout the body; and thence ariſe ſuch affections as pleaſe, recreate and refreſh the nature of man, as hope, joy, love, gladneſs, and mirth. Nor does it only comfort and ſtrengthen the body, but alſo the operation and imagination of the mind: which is ſo much the more neceſſary: in ſo much the imagination of the mother works forcibly upon the conception of the child. Women therefore, ought to take great care that their imagination be pure and clear, that their child may be well formed.

Thirdly, women ought to take care to keep the womb in good order: and to ſee that the menſes come down as they ought to do, for if they are diſcoloured, they are out of order. But if the blood comes down pure, then the woman will be very prone to conceive with child, eſpecially if they uſe copulation in two or three days after the monthly terms are ſtayed.

Fourthly, a woman that would conceive ſhould obſerve that ſhe does not uſe the act of coition too often; for ſatiety gluts the womb, and renders it unfit for its office. There are two things demonſtrate this; *i. e.* that common whores (who often uſe copulation) have never, or very rarely any children: for the graſs ſeldom grows in a

path that is commonly trodden in. The other is, that women, whose husbands have been long absent do, after copulation with them again conceive very quickly.

Fifthly, care should be taken that the time of copulation be convenient, that there may be no fear of surprize: for fear hinders conception. And then it were the best also that the desire of copulation be natural, and not stirred up by provocation; and if it be natural, the greater the woman's desire of copulation is, the more likely she is to conceive.

I will add no more, but what some authors report, that a loadstone carried about a woman, not only causeth conception, but concord between man and wife; if it be true, I would have no married woman go without one, both for her own and husband's quiet.

Let all the fair, who would have children from
Their soft embraces, read what's here laid down:
Those that to exercise themselves incline,
And in their love to be content design,
Who have their monthly terms in order flow;
And regulate them if they do not so;
That love's embraces moderately use,
And to enjoy them a fit season chuse;
These may, content with what they've done remain,
And need not fear their wishes to obtain.

SECT. II. *What a woman ought to observe after conception.*

After a woman has conceived, or has reason to think so, she ought to be very careful of herself lest she should do any thing that might hinder nature in her conception. For in the first two months after conception women are very subject to miscarriages, because then the ligaments are weak and soon broken. To prevent this, let the woman every morning drink a draught of sage ale, and it will do her abundance of good. And if signs of abortion or miscarriage appear, let her lay a toast dipped in tent (in case muscadel cannot be gotten) to the navel, for this is very good. Or, let her take a little green tansy, and having bruised it, sprinkle it with muscadel, and apply to the navel, and she will find it much better. Also tea infused in ale, like sage ale, and a draught drank every morning, is most excellent for such women as are subject to miscarriages. Also take juice of tansy, clarify it, and boil it up into a syrup, with twice its weight in sugar, and let a woman take a spoonful or two of it in such cases, and it will be an excellent preservative against miscarriages. Also, if she can, let her be where the air is temperate. Let her sleep be moderate; let her also avoid all watching and immoderate exercise, as also disturbing passions, loud clamours, and filthy smells; and let her abstain from all things which may provoke either urine or the courses, and also from all sharp and windy meats; and let a moderate diet be observed. If the excrements of the guts be retained, lenify the belly with clysters made of the decoction of mallows and violets, with sugar and common oil; or make broth of borage, burgloss, beets, mallows, and take therein a little manna; but on the contrary, if she be troubled with a loosenes of the belly, let it not be stopped without the judgment of a physician; for that matter all uterine fluxes have a malignant quality, and must be evacuated and removed before the flux be stayed.

CHAP. III.

How the Child lieth, and how it groweth up in the womb of the Mother after conception.

Section I.

How the Child is formed in the Womb after Conception.

AS to the formation of the child, it is to be noted; that after coition, the ſeed lies warm in the womb for ſix days without any viſible alteration, only the womb cloſes up itſelf to prevent its iſſuing forth again, and for the ſecuring it from any cold: and all this time it looks like butter, or coagulated milk. And it would be neceſſary for her who has conceived, to forbear the embraces of her huſband all this time, leſt the conception ſhould be ſpoiled. In three days after, it is altered from the quality of thick milk or butter, and becomes blood, or at leaſt reſembles it in colour; nature having now begun to work upon it; in the next ſix days following, that blood begins to be united into one body, grows hard and becomes a little quantity, and to appear a round lump. And, as in the firſt creation the earth was void, and without form, ſo in this creating work of divine power in the womb; in this ſhapeleſs embryo lies the firſt maſs. But in two days after the principal members are formed by the plaſtic power of nature, and theſe principal members are four in number, viz. The heart, the brain, the liver, and the teſticles, or ſtones. Three days after the other members are formed, and are diſtinguiſhed from the ſhoulders to the knees, and the heart, liver and ſtones, with their appurtenances, do grow bigger and bigger. Four days after that, the ſeveral members of the whole body appear, and as nature requires, they conjunctly and ſeverally do receive their perfection. And ſo in the appointed time, the whole creation hath that eſſence which it ought to have in the perfection of it, receiving from God a living ſoul, therewith putting in its noſtrils the breath of life. Thus I have ſhewn the whole operation of nature in the formation of the child in the womb, according to the energy given it by the Divine Creator, Maker, and upholder of all things both in heaven and earth.

By ſome others more briefly, but to the ſame purpoſe, the forming of the child in the womb of its mother is thus deſcribed: three days in the milk, three in the blood, twelve days from the fleſh, and eighteen the members, and forty days afterwards the child is inſpired with life, being endowed with an immortal living ſoul.

Section II.

Of the manner of the Child's lying in the Womb from the Conception to the Birth.

I come now to ſhew in what manner the child lieth in the womb of its mother, whilſt it is confined in the dark receſſes; firſt giving the reader the teſtimony of two or three of the moſt learned on this head.

The learned Hippocrates affirms, that the child, as he is placed in the womb, hath his hands upon his knees, and his head bent to his feet; ſo that he lies round together, his hands upon his knees, and his face between them; ſo that each eye touches each thumb, and his noſe betwixt his knees. And of the ſame opinion in this matter was Bartholonius the younger. Columbus is of opinion that the figure of the child in the womb is round, the right arm bowed, the fingers thereof

under the ear above the neck, and the head bowed, so that the chin toucheth the breast, the left arm bowed above both breast and face, and propped up by the bending of the right elbow: the legs are lifted upwards, the right of which is so lifted up, that the thigh toucheth the belly, the knees the navel; the heel toucheth the left buttock, and the foot is turned back, and covereth the secrets; the left thigh toucheth the belly, the knees the navel, the heel toucheth the left buttock, and the foot is turned back, and covereth the secrets; the left thigh toucheth the belly, and the leg lifted up to the breast, the back lying outwards.

Thus the reader may see how authors differ herein: but this ought to be noted, that the different positions which the child hath been seen in, hath given occasion to the different opinions of authors. For when the woman is young with child, the embryo is always found of a round figure, a little oblong, having the spine moderately turned inwards, the thighs folded, and a little raised, to which the legs are joined, that the heels touch the buttocks, the arms bending, and the hands placed upon the knees, towards which the head is inclining forwards so that the chin touches the breast; the spine of the back is at that time placed towards the mother's, the head uppermost, the hands forwards, and the feet downwards, and proportionable to its growth it extends its members by little and little, which were exactly formed in the first month. In this posture it usually keeps till the seventh or eighth month, and then by a natural propensity and disposition of the upper parts of the body the head is turned downwards toward the inward orifice of the womb, tumbling as it were over its head; so that the feet are uppermost, and the face towards the mother's great gut. And this turning of the infant in this manner with his head downwards towards the latter end of a woman's reckoning is so ordered of nature, that it may be the better disposed for the birth. The knowledge of these things being so essential to the practice of a midwife, I could not omit them.

CHAP. IV.

Of the Obstructions of Conception; with the Cause and Cure of Barrenness, and the Signs of Insufficiency both in Men and Women.

BEFORE I proceed any further, it is highly necessary that I treat of the obstructions of conception, which naturally leads me to treat of barrenness, the great obstruction of conception.

SECTION I. *Of barrenness.*

Barrenness is a natural and accidental defect, which hinders conception: for that which hinders conception causeth barrenness. There are several causes why conception may be hindered; as too much heat or cold dries up the seed, and makes it corrupt; this extinguishing the life of the seed, and that making it watrish, and unfit for generation. It may be caused also by the stoppage or overflowing of the courses, and by swelling ulcers, or inflammations of the womb, or by an excrescence of flesh growing about the mouth of the matrix, whereby the seed is hindered from being injected into the womb; and want of love in the persons copulating may also hinder conception, as is apparent from those women that are deflowered against their will: no conception following any forced copulation.

And here let me caution parents against one thing that often caus-

eth barrenneſs, which might eaſily be prevented; and that is, againſt letting virgins blood in their arm before their courſes come down; theſe come down in virgins uſually in the 14th year of their age, ſeldom before the 13th, but never before the 12th. Now, becauſe uſually a young virgin is out of order before they firſt break down, the mother goes with her to the doctor, who finding that fulneſs of blood is the occaſion of her illneſs, orders her to be let blood in the arm; upon which ſhe becomes well for a time, the ſuperfluous blood being taken away; and this remedy which is worſe than the diſeaſe, being repeated four or five times, the blood comes not down at all to the womb, as it doth in other women, but dries up, and is for ever barren; whereas, had ſhe been let blood in the foot, it would have brought the blood downwards, and ſo have provoked the terms, and prevented miſchief.

Another cauſe of barrenneſs is, for want of convenient moderate quality, which the woman ought to have with the man; as, if he be hot, ſhe muſt be cold; if he be dry, ſhe moiſt: but if they both are dry, or both of a moiſt conſtitution, they cannot propagate, though in this caſe neither of them may be barren, ſingly conſidered; for he or ſhe though now as barren as the barren fig tree, yet joined, with an apt conſtitution, may become as fruitful as the vine.

Another cauſe of barrenneſs may be the diſuſe of copulation; for ſome there are of that frigid conſtitution, that they either uſe not the means at all, or elſe perform it with ſo much languor and coldneſs that it is not likely it ſhould prove efficacious; for the act of coition ſhould be performed with the greateſt ardour and intenſeneſs of deſire imaginable, or elſe they may as well let it alone; a frigid diſpoſition being the effect of a cold diſtemper, and muſt be cured by ſuch things as heat and nouriſh. For,

Without good drink and feeding high
Deſires of Venus ſoon will die.

Such therefore ought to feed upon cock ſtones and lamb-ſtones, ſparrows, partridges, quails, and pheaſant's eggs. for 'tis an infallible aphoriſm in phyſick, that whatſoever any creature is extremely addicted to, they operate to the ſame end by their mutual virtue in the man that eats them. Therefore partridges, quails, ſparrows, &c. being extremely addicted to venery, they work the ſame effect in thoſe who eat them: and this likewiſe is worthy to be noted, that in what part of the body the faculty is ſtrong, as a medicine: as for inſtance, the virtus procreativus lies in the teſticles; therefore cock ſtones, &c. are medicinal in this diſtemper. Let ſuch perſons alſo eat ſuch food as is very nouriſhing, as parſnips, aliſanders, ſkirrets, and pine nuts; and let them take a dram of diaſatryon in an electuary every morning. The ſtones of a fox dried to powder, a dram taken every morning in tent, is alſo very good in this caſe: and ſo alſo is a dram of ſatyrion root taken in like manner.

SECTION II.

Of the Signs of Inſufficiency in Men; and Barrenneſs in Women.

After married people have lived long together, and both ſeem likely, and yet neither of them have children, there often ariſes diſcontent between them, and both are troubled becauſe they know not on what ſide the fault is. And though authors have left ſeveral ways to know whether the man or woman be defective, yet becauſe I cannot coin-

cide in their judgments, I shall pass them by in silence, and rather lay down a few rules that may be depended upon, than many that are uncertain. But I must first premise, that women are subject to many infirmities more than men, that the cause of barrenness is oftener on their side than the man's. For, if the man has the instrument of generation perfect, being in health, and keeping a regular and temperate diet and exercise, I know no accidental cause of barrenness in him: whereas the cause of barrenness in a woman lies in her womb, and the infirmities incident thereunto; some of which are stopping of the menstrua, or their overflowing; as also the falling out thereof, and the inflammation, windiness, heat, and dryness thereof, for each of which we will prescribe proper cures.

But to be more particular.

If a man or woman, in whom the instruments of generation appear no ways defective, would know whether the cause of barrenness be in themselves or their bed-fellow, let them take a handful of barley, or any other corn that will grow quickly, and steep half of it in the urine of a man and the other half in the urine of a woman, during the space of 24 hours. Then take it out, and set it, the man's by itself, and the woman's by itself in a flower pot, or something else, where you may keep them dry. Then water the man's every morning with his own urine, and the woman's with hers; and that which grows is most fruitful, and that which does not grow denotes the person to be barren. Nor let any despise this trial: for seeing physicians will by urine undertake to tell a person of his or her diseases, why should not urine also shew whether a person be fruitful or not? But if in a man the instrument of generation is not perfect, it will be obvious to the sight, and if the yard be so feeble, that it will not admit of erection, it can never convey seed into the womb, nor can there be in such a case any conception. But this is so plain and easily discerned, that it needs must be obvious to both parties, and the man who finds himself debilitated ought not to marry.

The case can't be so bad with the woman, though she be barren, but what her husband may make use of her, unless she be impenetrable, which (though it sometimes does) yet but rarely happens; and therefore the man is the most inexcusable if he transgress.

Besides what I have already mentioned, signs of barrenness in women are; if she be of an over hot constitution, of a dry body, subject to anger, hath black hair, a thick pulse, her purgations flow little, and that with pain, and yet hath a violent desire to coition; but if she be of a cold constitution, then are the signs contrary to those recited. If barrenness be caused through an evil quality of the womb, it may be known by making a fumigation of red storax, myrrh, cassia-wood, nutmeg, cinnamon, and letting her receive the fume of it in her womb, covering her very close. If the odour passeth through the body up into the mouth and nostrils, she is fruitful. But if she feel not the same in her mouth and nose, it denotes barrenness one of these ways, viz. That the seed is either through cold extinguished, or through heat dissipated. And if a woman be suspected to be unfruitful, cast natural brimstone, such as is digged out of the mine, into her urine, and if worms breed therein she is fruitful. But this shall suffice to be said of the causes and signs of barrenness, and 'tis now time to proceed to the cure.

SECTION III. *Of the Cure of Barrenneſs.*

In the cure of Barrenneſs reſpect muſt be had to the cauſe; for the cauſe muſt be firſt removed, and then the womb ſtrengthened, and the ſpirits of the ſeed enlivened by corroborating applications.

If barrenneſs proceeds from over much heat, let her uſe inwardly, ſuccory, endive, violets, water-lillies, ſorel and lettuce, white ſyrups and conſerves made thereof thus.

Take conſerve of borage, violets, ſuccory, water-lillies, of each one ounce, half an ounce of conſerve of roſes: diamagarition frigid, diatrion, ſancalon, of each half a dram; with ſyrup of violets, or juice of citrion, make an electuary.

Let her alſo take of endive, water-lillies, borage flowers, of each a handful, rhubarb, myrobalans, of each three drams; with water make a decoction; add to the ſtraining, the ſyrup relaxative of violets, one ounce, ſyrup of caſſia, half an ounce, manna three drams: make all into a portion. Take of the ſyrup of mugwort one ounce, ſyrup of maidenhair, two ounces, pulv. elect. trionſat, make all up into a julep. Apply to the reins and privities fomentations of the juice of lettuce, violets, roſes, mallows, vine-leaves, and knight-ſhade; let her alſo anoint her ſecret parts with the cooling ointment of galls. Baths are good for her to ſit in. Let the air be clear, her garments thin, her food, lettuce, endive, ſuccory and barley; but let her have no hot meats, or ſtrong wines, except it be wateriſh and thin. Reſt is good for her both in body and mind: but ſhe muſt uſe little copulation, but may ſleep as much as ſhe will.

If barrenneſs be occaſioned by the predominancy of cold extinguiſhing the power of the ſeed, which may be known by her deſiring venery, and receiving no pleaſure in the act of copulation, even while the man is ſpending his ſeed: her terms are phlegmatic, thick, ſlimy, and flow not rightly: in this caſe let her take ſyrup of calamint mugwort, betony, of each one ounce; water of pennyroyal, ſeverfew; hyſſop, ſage, of each two ounces; and make a julep. Let her take every morning two ſpoonfuls of cinnamon water, with one ſcruple of mithridate. Alſo let her take the oil of anniſeed, one ſcruple and a half, jeſſemine, diachylon both, dinoſch diaglang, of each one dram; ſugar four ounces: with water of cinnamon make lozenges, and take of them a dram and a half twice a day two hours before meals. Let her alſo faſten cupping glaſſes to her hips and belly; and let her take ſtorax calamita one ounce; maſtic, cloves, cinnamon, nutmeg, lignum aloes, frankincenſe, of each half an ounce, muſk ten grains, ambergreaſe half a ſcruple, with roſe water make a confection; divide it into four parts, of one make a pomum odoratum to ſmell to, if ſhe be not hyſterical: of the ſecond make a maſs of pills, and let her take three every night, of the third make a peſſary, and put it up; of the fourth make a fumigation for the womb.

If barrenneſs ariſes from the faculties of the womb being weakened, and the life of the ſeed ſuffocated by overmuch humidity flowing on thoſe parts, let her take of betony, marjorum, mugwort, pennyroyal, balm, of each one handful; root of onrum, fennel, elecampane, of each two drams; anniſeed, cummin ſeed, of each a dram, with ſugar and water a ſufficient quantity, of which make a ſyrup, and take three ounces every morning. Then purge with theſe pills following, take of pil. ext. two ſcruples: diagridion two grains, ſpecies decaſto one

ſcruple; make them up into nine pills with ſyrup of mugwort. Alſo take ſpec. diagminæ, diamoſchi, diambræ, of each one dram; cinnamon one dram and a half: mace, cloves, nutmeg of each half a dram; ſugar ſix ounces, with water of feverfew; make lozenges to be taken every morning. Likewiſe let her take of the decoction of ſarſaparilla, and viga aurea, with a good quantity of ſage, which is an herb of that virtue, that Cornelius Agrippa honoured it with the title of ſacra herba, a holy herb; and Dodonæus in his hiſtory of plants, reports that after a great plague had happened in Egypt, which had almoſt depopulated the country, the ſurviving women were commanded to drink the juice of ſage, that they might multiply the faſter. Let her anoint her genitals with the oil of anniſeed and ſpikenard. Trochiks to ſmooth the womb are alſo very good. To make which, let her take mace, nutmeg, cinnamon, ſtorax, amber, of each one dram; cloves, laden of each half a dram: turpentine a ſufficient quantity, laſtly, take the roots of valerian and elecampagne, of each one pound; of galangal three ounces; origan, marjorum, betony, mugwort, bay leaves, calamint, of each three handfuls; with water make an infuſion, in which let her ſit after ſhe has had her courſes. But to proceed.

If barrenneſs be cauſed by the dryneſs of the womb conſuming the matter of the ſeed, let her take every day almond milk and goat's milk, extracted with honey; eat often of the root of Satyrion candied, and of the electuary of diaſatryon. Let her alſo take three ſheep's heads, and boil them till the fleſh comes from the bones; then take of meliot violets, camomile, mercury, orchies, with the roots of each, one pound: fenugreek, lintſeed, valerian roots, of each a handful; let all theſe be decocted in the aforeſaid broth, and let the woman ſit in the decoction up to the navel. Alſo, take of deer's ſuet half an ounce; cow's marrow, ſtyracis liquidæ, of each a dram: or of ſweet almonds two ounces; with ſilk or cotton make a peſſary, and make injections, only of freſh butter and oil of ſweet almonds.

It ſometimes happens that barrenneſs is cauſed by remiſſneſs in the manner of the act of coition; and though there be no impediment on either ſide, yet if both ſexes meet not in that act with equal vigour, no conception follows: for many times the man is too quick for the woman, or rather the women is too ſlow for the man, and is not prepared to receive the ſeed with that delight which ſhe ought, when it is emitted by the man; and thoſe who follow the opinion of the ancients, that the woman contributes ſeed in the formation of the child as well as the man, are of opinion that there ought to be a joint emiſſion both of the man and woman at the ſame inſtant, which, adminiſtering to both a very great delight, perfects the work of conception. But if in this caſe the woman be ſlack, it will be proper for the man to follow the advice given in chap. III. ſect. 2. where both ſexes are ſhewn how to manage themſelves in the act of coition, that ſo by ſtirring up in the woman a deſire to venery, ſhe may meet his embraces with the greateſt ardour. If this ſhould prove ineffectual, let her before the act of coition foment the privities with the decoction of betony, ſage, hyſſop and caliment, anoint the mouth and head of the womb with muſks and civet; and the cauſe of barrenneſs being removed, let the womb be corroborated by the following applications.

Make of bay berries, maſtick, nutmeg, frankincenſe, cypreſs nuts,

zadani, galbani, of each one dram: ſtyracis liquidæ, two ſcruples; cloves, half a ſcruple; ambergreaſe, two grains; muſk, ſix grains, then with oil of ſpikenard make a peſſary. Alſo take red roſes, with frankincenſe, lapidis hæmatitis, of each half an ounce; ſanguis draconis, fine bole makick, of each two drams; nutmeg, cloves, of each one dram; ſpikenard half a ſcruple, and with oil of wormwood make a plaiſter for the lower part of the belly. And let her eat of erringo roots candied, and make an injection of the juice of the roots of ſtatyrion; and then let her uſe copulation ſoon after the menſes are ceaſed, conception being moſt apt to follow; for then the womb is thirſty and dry, and apteſt both to draw the ſeed and to retain it by the roughneſs of the inward ſuperficies. A woman ſhould be careful to avoid exceſs in all things, as being the greateſt enemy to conception. For, ſhould a woman conceive under care, ſtudy, &c. the child would probably be fooliſh, becauſe the animal faculties of the parents were confuſed.

CHAP. V.

SECTION I. *How Women ought to govern themſelves during their Pregnancy.*

FIRST, let a woman that is with child chuſe a temperate air, not infected with fogs, and for that reaſon, not near any marſhy ground, rivers, &c. But this cannot be avoided by ſome, their habitation falling out to be in ſuch places. But thoſe who can live where they pleaſe ought to avoid ſuch places: as likewiſe the going abroad in too hot or cold weather: alſo when the ſouth wind blows hard, for that often proves hurtful to women with child, and ſometimes cauſes abortion.

Secondly, ſhe ought alſo to be very cautious in the matter of her diet, chuſing only thoſe meats that create wholeſome nouriſhment, and ſuch as are immoderately dry; and let her take care to prevent and avoid immoderate faſting for that will weaken the infant, and render it of a ſickly conſtitution, and ſometimes cauſe abortion. And as all exceſſes are to be avoided; ſo ſhe muſt take care not only of avoiding immoderate faſting, but likewiſe immoderate eating too, which will not only be apt to ſtuff up the child, but to ſwell it up to that degree, that will endanger the life of itſelf and the mother in its birth. Let it ſuffice, that in general ſhe avoids all meats which are too hot, or too cold and moiſt; ſuch as ſallads, ſpices and hot meats, which often cauſe the child to be born before its time; and ſometimes without nails, which foreſhews a ſhort life. And therefore in this caſe the moſt wholeſome meats are pigeons, partridges, pheaſants, larks, veal, mutton, or any meat that yields good juice, and contributes kindly nouriſhment; as alſo ſuch fruits as are ſweet and of eaſy digeſtion, as cherries, pears, damſons, and the like. But let her avoid, as pernicious, all ſuch things as cauſe and create wind.

Care ought alſo to be taken with reſpect to her exerciſe; which ought to be moderate; for violent motion, either in walking or working, is hurtful and diſturbing to the womb, eſpecially riding upon the ſtones in a coach, or any other uneven place; and in like manner, all extraordinary ſounds and noiſes ſhould be avoided, eſpecially the ringing of bells, and the diſcharging of great guns; neither ought ſhe to give way to either immoderate laughing or weeping, or to anger, or any other paſſions, for that may be prejudicial to her.

SECTION II. *Further Rules for Women to observe during their Pregnancy.*

Though the act of coition is that without which conception cannot be, yet the immoderate use of it hinders the brief end for which it was designed. In the first four months after conception, she ought not to lie with her husband, at least sparingly, lest, by shaking the womb in that action, the courses should again be forced down. In the fifth and sixth month she ought also to abstain; but in the seventh, eighth and ninth, it may freely be permitted, by reason it opens the passage, and facilitates the birth. To contribute the better towards which, the woman should be careful to keep her body soluble; syrups, and other opening things, being very helpful to nature in those operations. Let her not lace too close, lest the child be thereby hindered from coming to its full growth.

To prevent any disorder that may happen to her breasts by too much blood, which will cause curdled milk, let her wear a necklace of gold about her neck, or rather a small ingot of steel between her breasts, fomenting them a quarter of an hour every morning, with water distilled from ground-ivy, periwinkle and sage, being blood warm.

When her belly is swelling, and the motion is great, which will be about the fourth month, she may swathe it with a swathe-band anointed with pomatum, or any other thing of that kind, to keep it smooth, and free from wrinkles. For which end it will be best to take of the caul of a kid, and of a sow, of each three ounces; capon-grease and goose-grease, of each one ounce and a half; and, having melted them all together, put thereto a quarter of a pint of water; after which strain them through a linen cloth into fair water, casting it to and fro therein till it be white; at which time add to it of marrow of a red deer, one ounce, and lay it in red rose water, twelve hours. After the expiration of which you may use it, anointing the swathe and belly.

But if these ingredients are not easy to be had, you may make use of the following liniment, which will do almost as well as the other; take of mutton suet (that which grows about the kidnies is best) and of dog's grease, of each two ounces, whale oil one ounce, and oil of sweet almonds the same quantity; wash them well, after they are melted together in the water of germander, or new white wine, anoint the belly and swathe therewith. Those that care not to anoint their bellies may make use of the following bath or decoction: take of all sorts of mallow, and mother-wort, each two handfuls; white lily roots three ounces, melilot and camomile, of each two handfuls; lime seeds, quince seeds and fenugreek seeds, three ounces, boil them well in spring water, and bathe therewith. If the woman, after her quickening, finds but little motion of the infant in her womb, let her make a quilt in the manner following, and bind it up the navel, and it will much strengthen and comfort the infant; take the powder of roses, red coral, and jelly-flowers, of each two ounces; mastich a dram, angelica seeds two drams, amber-grease two grains, and musk two grains; all which being well beaten, put them into a linen bag, spread them abroad and quilt it, that they may be in every part of it, placing it upon the navel, and it will have the desired effect. These things are sufficient to observe during the time of their pregnancy, that neither child nor mother may miscarry, but be brought to the birth at the appointed time.

CHAP. VI.

Directions for Midwives how to assist Women in the Time of their Labour; and how Child-bearing Women should be ordered in Time of their Lying in.

SECTION I.

How a Midwife ought to be qualified.

A MIDWIFE ought to be of a middle age, neither too old nor too young, and of a good habit of body, not subject to diseases, fears, or sudden frights; nor are the qualifications assigned to a good surgeon improper for a midwife, viz. a lady's hand, a hawke's eye, and a lion's heart: to which may be added, activity of body, and a convenient strength, with caution and diligence, not subject to drowsiness nor apt to be impatient. She ought to be sober and affable, not subject to passion, but bountiful and compassionate, and her temper cheerful and pleasant, that she may the better comfort her patients in their sorrow. Nor must she be very hasty, though her business may perhaps require her in another place, lest she should make more haste than good speed. But above all she ought to be qualified with the fear of God, which is the principal thing in every state and condition, and will furnish her on all occasions, both with knowledge and discretion. But now I proceed to more particular directions.

SECT. II. *What must be done, when the woman's time of labour is come.*

When the time of birth draws near, and the good woman finds her travailing pains to come upon her, let her send for a midwife in time; better too soon than too late, and get those things ready which are proper upon such occasions. When the midwife is come, let the first thing she does be to find whether the true time of the birth be come. The want of observing this hath spoiled many a child, and endangered the life of the mother; or at least put her to twice as much pain as she needed: for unskilful midwives, not minding this have given things to force down the child, and thereby disturbed the natural course of her labours; whereas nature works best in her own time and way. I do confess it is somewhat difficult to know the true time of some women's labour, they being troubled with pains so long before their true labour comes: in some, weeks before: the reason of which is the heat of the reins, which is manifest by the swelling of the legs. And therefore when women with child find their legs to swell much, they may be assured their veins are too hot. Wherefore my advice to such women is, to cool their reins before the time of labour, which may be effectually done by anointing the reins of the back with oil of poppies and violets, or water lilies, and thus they may avoid that hard labour which they usually undergo whose reins are hot, which, that they may the better prevent, let me recommend to you the decoction of plantain leaves and roots, which is thus made; Make a strong decoction of them in water, and then having strained and clarified it with the white of an egg, boil it into a syrup with its equal weight of sugar, and keep it for use. But since it is so necessary for midwives to know the time of a woman's labour, the following section will rightly inform them.

SECTION III.

Signs by which the true Time of Women's labour may be known.

When women draw near the time of their reckoning, especially

with their firſt child, and perceive any extraordinary pains in their belly, they immediately ſend for their midwife, as taking it for their labour, though perhaps thoſe pains which are ſo often miſtaken for labour are only cauſed by the cholic, and proceed from the wind; which pains though they come and go, griping the whole belly, are yet without any forcing downward into the womb, as is done by thoſe that go before labour. But theſe cholic pains may be removed by warm cloths laid upon the belly; and the application of a clyſter or two, by which thoſe pains that precede a true labour, are rather furthered than hindered. There are alſo other pains incident to women in that condition from the flux of the belly, which are eaſily known by the frequent ſtools that follow them.

But to ſpeak more directly of the matter; the ſigns of labour ſome few days before are, that the woman's belly, which before lay high, ſinks down, and hinders her from walking ſo eaſily as ſhe uſed to do: alſo their flows from the womb ſlimy humours, which nature has appointed to moiſten and make ſmooth the paſſage, that its inward orifice may be the more eaſily dilated when there is occaſion, which beginning to open at that time, ſuffers that ſlime to flow away, which proceeds from the glands, called preſtatæ. Theſe are ſigns preceding labour.

But when ſhe is preſently falling into labour, the ſigns are great pains about the reins and loins, which coming and retreating by intervals, anſwer in the bottom of the belly by congruous throes: and ſometimes the face is red and inflamed, the blood being much heated by the endeavours a woman makes to bring forth the child: and likewiſe becauſe during the ſtrong throes her perſpiration is intercepted, which cauſes the blood to have recourſe to her face: her privy parts are ſo ſwelled by the infant's head lying in the birth, which, by often thruſting, cauſes thoſe parts to diſtend outwards. She is likewiſe much ſubject to vomiting, which is alſo a ſign of good labour, and ſpeedy delivery, though by a great many ignorant women thought otherwiſe; for good pains are thereby excited and redoubled: which vomiting is occaſioned by the ſympathy there is between the womb and the ſtomach: Alſo, when the birth is near, moſt women are troubled with a trembling of the thighs and legs: not with cold, like the beginning of an ague fit, but with the heat of the whole body: though this indeed does not happen always. Alſo if the humours which then flow from the womb, are diſcoloured with blood (which is what the midwife calls *ſhews*) it is an infallible mark of the birth's being near: and then if the midwife put her finger up the neck of the womb, ſhe will find the inner orifice dilated; at the opening of which the membranes of the infant, containing the waters, preſent themſelves, and are ſtrongly forced downwards with each pain ſhe hath; at which time one may perceive them ſometimes to reſiſt the finger: And then again to preſs forwards, being more or leſs hard or extended, according as the pains are ſtronger or weaker. Theſe membranes with the water in them, when they are before the head of the child, which the midwives call the gathering of the womb, to the touch of the fingers reſembles thoſe eggs which yet have no ſhell, but are covered only by a ſimple membrane. After this, pains ſtill redoubling, the membranes are broken by the ſtrong impreſſion of the waters, which preſently flow away, and then the head of the infant is preſently felt naked,

and presents itself at the inward orifice of the womb. When those waters come thus away, then the midwife may be assured the birth is very near; this being the most certain sign that can be; for the amnion and allantois being broken which contained those waters by the pressing forward of the birth, the child is no more able to subsist long in the womb afterwards, than a naked man in a heap of snow. Now, these waters, if the child come presently after them, facilitate the labour, by making the passage slippery: and therefore let no midwife use means to force away the water: for nature knows best when the true time of the birth is and therefore retains the water till that time; but if by accident the water breaks away too long before the birth, then such things as will hasten it may be safely administered.

Section IV.

What is to be done at the Time of Labour.

When the midwife is satisfied that it is the true time of labour, she must take care to get all things ready that are necessary to comfort the travailing woman in that time; and the better to do it, let her see that she be not strait laced. She may also give her a pretty strong clyster, if she finds there is occasion for it; but with this proviso, that it be done at the beginning, and before the child be too forward; for otherwise it will be difficult for her to receive it. The advantage of which clyster is, that the gut thereby will be excited to discharge itself of its excrements, and the rectum being emptied, there will be more space for the dilating of the passage; likewise to cause the pains to bear more downwards, through the endeavours she makes when other necessary things for her labour are put in order, both for the mother and the child.

As to the manner of the delivery, various midwives use different ways: some are delivered sitting on a midwife's stool; but, for my own part, I think that a pallet-bed girded and placed near the fire, that the good woman may come on each side, and be the more readily assisted, is much the best way.

And if the labouring woman abounds with blood it may not be improper to let her bleed a little, for by that means she will both breathe the better, and have her breath more at liberty, and likewise more strength to bear down her pain: and this may be done without danger, because the child being now ready to be born, needs not the mother's blood for its nourishment any longer; and not only so, but this evacuation does many times prevent her having a fever after delivery. Likewise if her strength will permit, let her walk up and down her chamber; and the better to enable her thereto, let her take some good strengthening things, such as new-laid eggs, jelly broth, some spoonfuls of burnt wine; and encourage her to hold off her pains, bearing them down when they take her, all that she can. And let the midwife often touch the inward orifice with her finger, that she may better know whether the waters are going to break, and whether the birth will follow soon after; for generally the birth follows in two hours after the efflux of the water. And to help it afterwards, let her anoint the woman's privities with emolient oil, hog-grease, and fresh butter; especially if she finds them too hard to be dilated.

Let the midwife also be near the labouring woman all the while

and diligently obſerve her geſtures, pains and complaints, for by this ſhe may gueſs pretty well how her labour goes forward; for when ſhe changes her groans into loud cries it is a great ſign the birth is near; at which time her pains are greater and more frequent. Let her alſo ſometimes reſt herſelf on her bed to renew her ſtrength, but not too long at a time, for to lie too long at a time will retard her labour, and therefore 'tis better for her to walk about her chamber as much as ſhe can; which, that ſhe may the better do, let the good woman ſupport her under her arms, if it be neceſſary; for by walking, the weight of the child cauſes the inward oriſice of the womb to dilate much ſooner than it would do if ſhe lay upon her bed; beſides her pains, by walking will be ſtronger and more frequent and by conſequence her labour will not be near ſo long. If ſhe finds any ſick qualms let her not be diſcouraged; and if ſhe finds any motions to vomit, let her not ſuppreſs them, but rather give way to them; for it will (however uneaſy and irkſome they be for the preſent) be much for her benefit, becauſe they further the pains and provoke downward.

Section V.

How to provide the Birth and cauſe ſpeedy Delivery.

When the birth is long deferred after the coming down of the waters, let her haſten the birth by drinking a good draught of wine, wherein dittany, red coral, juniper berries, betony, pennyroyal, and feverfew have been boiled, or the juice of feverfew taken in its prime (which is in May) and clarified and ſo boiled in a ſyrup, and twice its weight of ſugar is very good upon this occaſion. Alſo mugwort uſed in the ſame manner works the ſame effect. And ſo alſo does a dram of cinnamon in powder, given inwardly, or tanſy bruiſed and applied to the privities. Likewiſe the ſtone Ætites held to the privities does in a very little time draw forth the child and the after burthen; but great care muſt be taken to remove it gently, or elſe it will draw forth the womb and all, ſo great is its magnetic virtue. Alſo a decoction of ſavory made with white wine, and drank, gives a woman ſpeedy delivery. Alſo wild tanſy or ſilver weed bruiſed and applied to the woman's noſtrils, is very good. So alſo are date ſtones beaten to powder, and half a dram of them taken in white wine: parſly is of excellent uſe on this occaſion; for if you bruiſe it and preſs out the juice, and then dip a linen cloth in it, and put it up, being ſo dipped, in the mouth of the womb, it will preſently cauſe the child to come away, though it be dead, and will bring away the after burden alſo. The juice of parſley being of great virtue eſpecially the ſtone parſley, being drank by a woman with child it cleareth not only the womb, but alſo the child in the womb, of all groſs humours. A ſcruple of caſtorum in powder, in any convenient liquor, is very good to be taken in ſuch a caſe, and ſo alſo are two or three drops of ſpirit of caſtorum in a convenient liquor. Eight or nine drops of the ſpirit of myrrh, given in a convenient liquor, have the ſame effect. Or, give a woman in travail another woman's milk to drink, it will cauſe ſpeedy delivery. Alſo the juice of leeks being drank with warm water hath a mighty operation cauſing ſpeedy delivery. Take piony ſeeds, beat them to powder, and mix the powder with oil; with which oil anoint the loins and privities of the woman with child; it gives her deliverance very ſpeedily, and with leſs pain than can be imagined.

And this may be noted for a general rule, that all thoſe things that move the terms are good for making the delivery eaſy. There are ſeveral other things efficacious in this caſe; but I need not heap medicines unneceſſarily, thoſe I have already named being ſufficient.

When any of the forenamed medicines have haſtened the birth, let the midwife lay the woman in a poſture for delivery. And firſt let the woman be conducted to the pallet-bed placed at a convenient diſtance from the fire, according to the ſeaſon of the year; and let there be a quilt laid upon the pallet-bedſtead, which is better than a feather bed, and let it have thereon a linen cloth in many folds, with ſuch other things as are neceſſary, which may be changed according as the occaſion requires it, that ſo the woman may not be incommoded with blood, waters and other filth, which are voided in labour. Then let her lay the woman upon her back, having her head a little raiſed by the help of a pillow, having the like help to ſupport her reins and buttocks, that her rump may lie high; for if ſhe lie low, ſhe cannot very well be delivered. Then let her keep her knees and thighs as far aſunder as ſhe can, her legs being bowed towards her buttocks, and let her feet be ſtayed againſt a log, or ſome other firm thing. And let two women hold her two ſhoulders that ſhe may ſtrain out the birth with the more advantage, holding in her breath, and forcing herſelf as much as poſſible in like manner as when ſhe goes to ſtool: for by ſuch ſtraining, the diaphragm or midriff, being ſtrongly thruſt downwards, neceſſarily forces down the womb, and the child in it. In the mean time, let the midwife encouruge her all ſhe can, and take care that ſhe have no rings on her hands when ſhe anoints the part: then with her finger let her gently dilate the inward oriſice of the womb, and putting her fingers in the entry thereof, ſtretch them from one another when her pains take her, by this means endeavour to help forward the child, and thruſting by little and little the ſides of the oriſice towards the hinder part of the child's head, anointing thoſe parts with freſh butter, in caſe it be neceſſary. And when the head of the infant is ſomewhat advanced into the inward oriſice, it is uſual among midwives to ſay it is crowned, becauſe it both girds and ſurrounds it like a crown; but when it is gone ſo far, and the extremity begins to appear without the privy parts, they then ſay, the child is in the paſſage; and at this time the woman feels herſelf as if ſhe was ſcratched or prickled with pins, and is ready to think that the midwife hurts her; whereas in truth it is only occaſioned by the violent diſtenſion of thoſe parts, which ſometimes even ſuffer a laceration through the bigneſs of the child's head. When things are come to this poſture, let the midwife ſeat herſelf conveniently to receive the child, which will not come very quickly; and with her fingers'end which ſhe ought alſo to be ſure to keep pared, let her endeavour to thruſt the crowning of the womb back over the head of the child. And as ſoon as it is advanced as far as the ears or thereabout, let her take hold of the two ſides with her two hands, and wait till the good pain comes, and then quickly draw forth the child, taking care that the navel-ſtring, be not entangled about the child's neck, or any other part, as ſometimes it is, leſt thereby the after-burden be pulled with violence, and perhaps the womb, alſo, to which it is faſtened, ſo either cauſe her to flood or elſe break the ſtring, both which are of bad conſequence to the woman, and render her delivery the more difficult. Great care

muſt be taken that the head be not drawn forth ſtraight, but ſhake it a little from one ſide to the other, that the ſhoulders may the ſooner and eaſier take its place immediately after it is paſt; which muſt be done without loſing any time leſt the head being paſſed, the child ſtop there by the largeneſs of the ſhoulders, and ſo be in danger of being ſuffocated in the paſſage, as it has ſometimes happened for want of care therein. When the head is born, ſhe may ſlide in her fingers under the armpits, and the reſt of the body will follow without difficulty. As ſoon as the midwife hath in this manner drawn forth the child, let her lay it on one ſide, leſt the blood and water which follow too immediately ſhould do it an injury, by running into its mouth and noſe, as it would do if it lay on its back, and ſo endanger the choking of it. The child being thus drawn forth, the next thing requiſite is to bring away the after-burden; but before that, let the midwife be very careful to examine whether there be any more children in the womb; for ſometimes a woman may have twins; of which the midwife may ſatisfy herſelf both by the continuance of the woman's throes and the bigneſs of her belly. But this is not ſo certain as to put her hand up the entry of the womb, and there feel whether another child is not preſenting to the paſſage: and if ſo, ſhe muſt have a care how ſhe goes about the after-birth till the woman be delivered. The firſt ſtring muſt be cut and tied with a thread three or four double, and the ends faſtened with a ſtring to the woman's thigh, to prevent the inconvenience it may cauſe by hanging between the thighs.

Section VII. *Of the After-burden.*

Until the after-burden is brought away, which ſometimes is more difficult to do than the child, and altogether as dangerous, if it be not ſpeedily done, the woman cannot properly be ſaid to be ſafely delivered, though the child be born.

Therefore as ſoon as the child is born, before the midwife either ties or cuts the navel ſtring leſt the womb ſhould cloſe, let her, having taken the ſtring, wind it once or twice about one or two of the fingers of the left hand, joined together, the better to hold it, with which ſhe may only take ſingle hold of it above the left, near the privities, drawing likewiſe with that very gently, reſting a while, with the fore finger of the ſame hand extending and ſtretching along the ſtring towards the entry of the Vagina, always obſerving, for the more facility, to draw it from the ſide to which the burden leaſt inclines, for in ſo doing the reſt will ſeparate the better. And extraordinary care muſt be taken that it be not drawn forth with too much violence, leſt by breaking the ſtring near the burden, the midwife be obliged to put her whole hand into the womb to deliver the woman; and ſhe had need to take care in this matter, that ſo the womb itſelf, to which ſometimes this burden is faſtened very ſtrongly, be not drawn away with it, which has ſometimes happened. It is therefore neceſſary, to aſſiſt nature with proper remedies, which are in general, whatever has been before mentioned, to cauſe a ſpeedy delivery; for whatever has magnetic virtue to bring away the birth, has the ſame to bring away the after-birth. Beſides which, the midwife ought to conſider that the woman cannot but be much ſpent by the fatigue ſhe has already undergone in bringing forth the infant, and therefore ſhould be ſure to take care to give her ſomething to comfort her. To which purpoſe ſome good

jelly-broths, and a little wine, with a toaſt in it, and other comforting things, will be neceſſary. Sneezing being conducive to bring away the after-birth, let her take a little white hellebore in powder to cauſe her to ſneeze. Tanſy, and the ſtone Ætites, applied as before directed, is very efficacious in this. The ſmoke of marygold flowers, received up the woman's privities by a funnel, will bring away the after-birth, though the midwife has loſt her hold. Or, if you boil mugwort in water till it be very ſoft, and then take it out and apply it like a poultice to the navel of the woman in travail, conſtantly brings away both the birth and the after-birth; but as ſoon as they are come forth, it muſt be inſtantly taken away; leſt it ſhould bring away the womb alſo.

SECTION VIII. *How to cut the Child's Navel ſtring.*

After the birth and after-birth are ſafely brought away, the midwife ought to take care to cut the navel-ſtring; which, though it be by ſome eſteemed a thing of ſmall matter, yet it requires none of the leaſt ſkill of a midwife to do it with that care and prudence which it ought, and therefore to inſtruct the induſtrious midwife a little herein: As ſoon as the child is come into the world, let her conſider whether it be weak or ſtrong; if it be weak, let her gently put back part of the vital and natural blood in the body of the child by the navel, for that recruits a weak child, the vital and natural ſpirits being communicated by the mother to the child by its navel-ſtring. But if the child be ſtrong there is no need of it. Only it will not be amiſs to let the midwife know, that many children that are born ſeemingly dead, may be brought to life again if ſhe ſqueeze ſix or ſeven drops of blood out of that part of the navel-ſtring which is cut off, and give it to the child inwardly.

As to the cutting it ſhort or long, authors can ſcarce agree about it, nor midwives neither; ſome preſcribe it to be cut at four fingers breadth, which is at the beſt but an uncertain rule, unleſs all fingers were of an equal ſize. 'Tis a received opinion, that the parts adapted to generation are either contracted or dilated according to the cutting of the navel-ſtring, which is the reaſon that midwives are generally ſo kind to their own ſex, that they leave a longer part of the navel-ſtring of a male than a female, becauſe they would have the male well provided for the encounters of Venus. And the reaſon they give why they cut thoſe more ſhort is, becauſe they believe it makes them modeſt, and their parts narrower, which makes them more acceptable to their huſbands. But whether this be ſo or not (which yet ſome of the greateſt ſearchers into the ſecrets of nature affirm for a truth) yet certain it is that great care ought to be uſed about cutting the navel-ſtring; and eſpecially, that after it is cut, it be not ſuffered to touch the ground, for if it be, the child will never be able to hold its water, but be ſubject all its life time to diabetes, as experience often confirms: but as to the manner of cutting the navel-ſtring, let the midwife take a brown thread, three or four times double, of an ell long, or thereabouts, tied with a ſingle knot at each of the ends, to prevent their entangling; and with this thread ſo accommodated (which the midwife ought to have in readineſs before the woman's labour, as alſo a good pair of ſciſſors, that ſo no time may be loſt) let her tie the ſtring within an inch of the belly with a double knot, and turning

about the ends of the thread, let her tie two or more on the ſide of the ſtring, reiterating it again, if it be neceſſary; then let her cut off the navel-ſtring, another inch below the ligator towards the after-birth; ſo that there only remains but two inches of the ſtring in the midſt of which will be the knot ſpoken of, which muſt be ſo ſtrait knit, as not to ſuffer a drop of blood to ſqueeze out of the veſſels: but yet care muſt be taken not to knit it ſo ſtrait as to cut it in two; and therefore the thread muſt be pretty thick, and pretty ſtrait knit, it being better too ſtrait than too looſe. Some children have miſerably loſt their lives, before it hath been diſcovered that the navel-ſtring was not well tied. Therefore great care muſt be taken that no blood ſqueeze through, for if there do, new knots muſt be made with the reſt of the ſtring. You need not fear to bind the navel-ſtring very hard, becauſe it is void of ſenſe; and that part of it which you leave on falls off of its own accord in a few days, ordinarily ſix or ſeven, and ſometimes in leſs time, but it very rarely tarries longer than the eighth or ninth day.

As ſoon as the navel-ſtring is cut off, apply a little cotton or lint in the place to keep it warm, leſt the cold enter into the body of the child, which it will unavoidably do, in caſe it be not bound hard enough: and if the lint or cotton you apply to it be dipped in the oil of roſes, it will be the better: then having put another ſmall rag, three or four times double, upon the body of the child, above the navel, lay the ſtring ſo wrapped upon it that it may touch the naked belly. Upon the top of all put another ſmall bolſter; and then ſwathe it in a linen ſwathe, four fingers broad, to keep it ſteady, leſt by rolling too much, or being continually ſtirred from ſide to ſide, it come to fall off before the navel-ſtring which you left remaining is fallen off. 'Tis the uſual cuſtom of the midwives to put a piece of burnt rag to it; but I would adviſe them to put a ſmall quantity of bole ammoniac, becauſe of its drying quality. Thus much may ſuffice as to cutting the navel-ſtring and delivery of a woman in labour, where the labour is natural, and no ill accident happens. But it ſometimes falls out, that the labour is not only hard and difficult, but unnatural alſo, in which the midwife muſt take other meaſures.

CHAP. VII.

What unnatural Labour is, and whence it proceeds; and what the Midwife ought to do in ſuch Caſes.

SECTION I. *What unnatural Labour is.*

IT will be neceſſary to acquaint my reader, that there are three ſorts of bad labour, all painful and difficult, but not all properly unnatural, which are as follows:

The firſt, properly ſtiled hard labour, is that wherein the mother and child do ſuffer very much by extreme pain.

The ſecond is difficult labour, different from the former, in that beſides theſe extreme pains, it is generally attended with ſome unhappy accident, which, by retarding the birth, makes it very difficult: Neither of thoſe, though hard and difficult, can be called unnatural; for women to bring forth children in pain and ſorrow is natural.

It is therefore the third ſort of labour which I call unnatural; and that is, when the child eſſays to come into the world in a contrary

poſition to that which nature ordained. To explain this, the reader muſt know that there is but one right and natural poſture in which children come to the birth, and that is when the head comes firſt, and the body follows after in a ſtraight line. If, inſtead of this, the child comes with its feet foremoſt, or with the ſide acroſs, it is contrary to nature, or, to ſpeak more plainly unnatural.

Section II.

Whence hard, difficult, and unnatural Labour proceeds.

The true phyſical reaſon why women in general bring forth their children with ſo much pain, is that the ſenſe of feeling being diſtributed to the whole body by the nerves, and the mouth of the womb being ſo ſtrait, that it muſt of neceſſity be dilated at the time of her delivery: the dilating thereof ſtretcheth the nerves, and from thence cometh the pain: ſome women having more pain in their labour than others proceeds from their having the mouth of the matrix more full of nerves than others.

Hard and difficult labour may proceed either from the mother, or child, or from both: it may proceed from the mother, by reaſon of a general indiſpoſition of her body, or from the indiſpoſition of ſome particular part, and that principally of the womb, which may be affected with ſuch a weakneſs as renders the mother unable to expel her burden. It may be alſo becauſe ſhe is too young, or ſhe may be too old, and ſo may have the paſſage too ſtrait, and then if it be her firſt child, the parts may be too dry and hard, and cannot eaſily be dilated. The chelic does alſo cauſe labour to be hard and difficult, becauſe it hinders the true pain which ſhould accelerate it; for which reaſon, all great and acute pains render a woman's labour very difficult. As when the womb is taken with a violent fever, frequent convulſions, a great flooding, or any other violent diſtemper, eſpecially when the membranes are thick, or the orifice is too ſtrait, or the neck of the womb not ſufficiently opened.

Hard labour may alſo proceed from the child, and this is, either when it happens to ſtick to a mole, or is ſo weak that it cannot break the membrane; alſo when it is too big, either all over, or its head only; or the navel veſſels ſhould be twiſted about its neck, as when it proves monſtrous, or comes into the birth in an unnatural poſture. Sometimes it proceeds from the ignorance of the midwife, who may hinder nature in her work.

Section III.

How the Midwife muſt proceed in order to the Delivery of a Woman, in caſe of hard Labour and great Extremity.

In caſe the midwife finds a woman in difficult labour, ſhe muſt endeavour to know the particular obſtruction or cauſe thereof, that ſo ſhe may apply a ſuitable remedy. When hard labour is cauſed by a woman's being too young and too ſtrait, the paſſages muſt be anointed with oil, hog's lard, or freſh butter, to relax and dilate them the eaſier. But if a woman be in years, and has hard labour from her firſt child, let her lower parts be anointed to molify the inward orifice, which in ſuch caſe (being more hard and callous) does not eaſily yield to the diſtenſion of labour; and indeed this is the true cauſe why ſuch women are longer in labour, and why their children in their birth are

more ſubject to bruiſes than others. Thoſe who are very lean, and have hard labour from that cauſe, let them moiſten their parts with oil, and ointments, to make them more ſmooth and ſlippery, that the head of the infant in the womb may not be compreſſed and bruiſed by the hardneſs of the mother's bones in its paſſage. But if the cauſe be weakneſs, ſhe ought to be ſtrengthened, the better to enable her to ſupport her pain. Since difficult labour proceeds from divers cauſes, the midwife muſt make uſe of ſeveral remedies to women in hard, difficult labour, which muſt be adapted to the cauſe from whence it proceeds.

I need not tell the judicious midwife, that in caſe of extremity, when the labour is not only hard, but difficult labour dangerous, a far greater care muſt be had than at other times. In ſuch caſes the ſituation of the womb muſt be minded, and accordingly her poſture of lying will be regulated; which will be beſt acroſs the bed, being held by thoſe that are of a good ſtrength to prevent her ſlipping down, or moving herſelf during the time of the operation. Then let her thighs be put aſunder as far as may be, and held ſo, while her legs are bent backwards towards her hips, her head leaning upon a bolſter, and the reins of her back ſupported in like manner, her rump and buttocks being lifted up: obſerving to cover her ſtomach, belly, and thighs, with warm linen, as well for decency's ſake as to keep them from the cold.

The woman being in this poſture, let the midwife, or other operator, put up her hand, and try if the neck of the womb be dilated, and then remove the contracted blood that obſtructs the paſſage of the birth, and having gently made way, let the operator tenderly move the infant, having the hand anointed with ſweet butter, or an harmleſs pomatum, and if the waters are not come down they may be let forth without any difficulty. And if the infant ſhould attempt to break forth, not with the head foremoſt or acroſs, he ought gently to turn it, that he may find the feet; which having done, let him draw forth one and having faſtened it to a ribbon, put it up again, and finding the other, bring them as cloſe as may be: let the woman breathe between whiles, aſſiſting nature what ſhe can by ſtraining in bringing forward the birth, that ſo he may more eaſily draw it forth; and that the operator may do it the better, and his hold may be the ſurer, he muſt faſten or wrap a linen cloth about the child's thighs, obſerving to bring it into the world with its feet downwards.

But in caſe there be a flux of blood, let the operator be well ſatisfied whether the child or the ſecundine come firſt; for ſometimes when the ſecundine has come firſt, the mouth of the womb has been thereby ſtopped, and the birth hindered, to the hazard both of the woman and child; and therefore in this caſe the ſecundine muſt be removed by a ſwift turn, and the child ſought for, and drawn forth, as has been directed.

If upon inquiry, it appears that the ſecundine comes firſt, let the woman be delivered with all convenient ſpeed, becauſe a great flux of blood will follow; for then the veins are opened. And on this account two things are to be minded: firſt, whether the ſecundine advances forward much or little: if the former, and the head of the child firſt appears, it muſt be directed to the neck of the womb, as in the caſe of natural births; but if there appears any difficulty in the

delivery, the beſt way is to ſearch for the feet, and by them it may be put by with a gentle hand, and the child taken out firſt: but if the ſecundine is advanced, ſo that it cannot be put back, and the child follow it cloſe, then the ſecundine is to be taken out firſt with much care, and as ſwift as may be, and laid aſide without cutting the entrail that is faſtened to them; for by that you may be guided to the infant, which, whether it be alive or dead, muſt be drawn forth by the feet as ſoon as poſſible; though this is not to be done but in caſe of great neceſſity, for the order of nature is for the ſecundine to come laſt.

SECTION IV. *Of the Delivery of a Dead Child.*

In delivering a woman of a dead child, the operator ought to be certain the child is dead, which might be known by the falling of the mother's breaſts, the coldneſs of her belly, the thickneſs of her urine, which is attended with a ſtinking ſediment at bottom; and no motion to be perceived in the child: Alſo, when ſhe turns herſelf in her bed, the child ſways like a lump of lead, and her breath ſtinks, though not uſed to do ſo. When the operator is certain that the child is dead, let him or her apply themſelves to the ſaving of the mother, by giving her thoſe things that are moſt powerful in ſerving nature in her operations. But, if through weakneſs, the womb is not able to co-operate with nature, ſo that a manual operation is abſolutely neceſſary, let the operator carefully obſerve the following directions, viz. If the child be found dead with his head foremoſt, he muſt take notice that the delivery will be the more difficult, becauſe in this caſe it is not only impoſſible that the child ſhould any ways aſſiſt in its delivery, but the ſtrength of the mother does alſo very much fail her, wherefore the moſt ſure and ſafe way for him is to put up his left hand, ſliding it, as hollow in the palm as he can, into the neck of the womb, into the lower part thereof towards the feet, and then between the infant and the neck of the matrix; and having a hook in the right hand, couch it cloſe, and ſlip it above the left hand, between the head of the child and the flat of the hand, fixing it into the bone of the temple towards the eye; or, for want of convenient coming at that, obſerve to keep the left hand in its place, gently moving and ſtirring the head with it, and ſo with the right hand hook draw the child forward, encouraging the woman to put forth her utmoſt ſtrength, and always drawing when the woman's pangs are upon her. The head being thus drawn forth, the operator muſt, with all ſpeed, ſlip his hand under the arm holes of the child, and take it quite forth, giving immediately to the woman a toaſt of fine wheaten bread in a quarter of a pint of tent, to revive and cheriſh her ſpirits. By what I have already ſhewn, the midwife will know what to do in any other caſe that may fall out, remembering, that for a child to come head foremoſt, and the body to follow in a ſtraight line, is the right poſture for the child when it comes to the birth; and if it comes any other way, it will be the wiſdom of the midwife, if poſſible to bring it to its poſture; but if that cannot be done without very great danger, then put it in a poſture that it may be brought forth by the feet. And the midwife perceiving in what poſture the child preſents, or that the woman floods, or any other accident happens, by which ſhe finds it is not in her power to deliver it, it will be beſt for her to ſend for a man-midwife in time, rather than put things to the utmoſt extremity.

CHAP. VIII.

SECTION I. *Directions for child-bed Women after Delivery.*

AFTER the birth and after-birth are brought away, if the woman's body be very weak, keep her not too hot, the extremity of heat weakens nature, and diſſolves the ſtrength: but whether ſhe be weak or ſtrong, let no cold air come near her, for cold is an enemy to the ſpermatic parts; and if cold gets into the womb, it increaſes the after pains, cauſes ſwellings in the womb, and hurts the nerves. Therefore if a woman has had very hard labour 'tis proper, after delivery to wrap her in the ſkin of a ſheep, taken as warm as poſſible, and putting the fleſhy ſide to her reins and belly: if a ſheep's ſkin cannot well be had, the ſkin of a hare or rabbit, taken off as ſoon as it is killed, may be applied to the ſame parts, and by ſo doing the dilation made in the birth will be cloſed up, and the melancholy blood expelled from thoſe parts: and theſe may be continued during the ſpace of an hour or two. After which let the woman be ſwathed with a fine linen cloth, about a quarter of a yard in length, chafing her belly, before it be ſwathed, with the oil of St. John's wort: afterwards raiſe up the matrix with a linen cloth, many times folded, then with a little pillow or quilt cover her flank, place the ſwathe ſomewhat above the haunches, winding it indifferently ſtiff, applying, at the ſame time, a warm cloth to the nipples. Care ſhould be taken not to apply any remedy to keep back the milk, becauſe thoſe remedies which drive back the milk, being of a diſſolving nature, it is improper to apply them to the breaſt during ſuch a diſorder, leſt evil humours ſhould be contracted in the breaſt thereby; and therefore twelve hours at leaſt ought to be allowed for the circulation and ſettlement of the blood.

After the woman has been delivered ſome time, you may make a reſtrictive of the yolk of two eggs, a quarter of a pint of white wine, oil of St. John's wort, oil of roſes, plantain, and roſe water, of each an ounce, mix them together, fold a linen cloth, and dip therein, warm it before a gentle fire, apply it to the breaſts, and the pain of thoſe parts will be greatly eaſed.

But be ſure not to let her ſleep ſoon after her delivery, but let her take ſome broth, or caudle, or any other liquid matter that is nouriſhing, about four hours after her delivery, and then ſhe may be ſafely permitted to ſleep, if ſhe is diſpoſed, as it is probable ſhe will be, being tired with the fatigue of her labour. But before this, as ſoon as ſhe is laid in her bed let her drink a draught of burnt white wine, in which melt a dram of ſperm'aceti. Let her alſo avoid the light for the firſt three days; for labour weakens the eye ſight. The herb vervain is of a ſingular ſervice to the ſight, and may be uſed any way, either boiled in meats or drink, not having the leaſt offenſive taſte, but many pleaſant virtues. If ſhe ſhould be feveriſh, add the leaves or roots of plantain to it; but if her courſes come not away as they ought, let the plantain alone, and inſtead thereof put mother of thyme. If the womb is foul, which may be known by the impurity of the blood, and its ſtinking and coming away in clotted lumps: or if you ſuſpect any of the after-birth be left behind, which may ſometimes happen, though the midwife be ever ſo careful and ſkilful, then make her a drink of feverfew, pennyroyal, mother of thyme, boiled in white wine, and ſweetened with ſugar: panada and new laid eggs are the beſt meat

for her at firſt; of which let her eat often, and but a little at a time. Let her uſe cinnamon in all her meats and drinks, for it mightily ſtrengthens the womb; let her ſtir very little for ſix or ſeven days after her delivery; and talk little, for that weakens her. If ſhe goes not well to ſtool, give her a clyſter made with the decoction of mallows, and a little brown ſugar. After ſhe has lain-in a week or more, give her ſuch things as cloſe the womb; to which you may add a little polypodium, both leaves and roots bruiſed, which will purge gently: This is as much in caſe of natural birth as needs at firſt be done.

Section II.

In extremity of unnatural Labour.

Let the woman be ſure to keep a temperate diet; and take care that ſhe does by no means overcharge herſelf, after ſuch an exceſſive evacuation, not being ruled by or giving credit to unſkilful nurſes, who are apt to admoniſh them to feed heartily, the better to repair the loſs of blood: for the blood is not for the moſt part pure, but ſuch as has been detained in the veſſels or membranes, and it is better voided for the health of the woman than kept, unleſs there happens an extraordinary flux of blood; for if her nouriſhment be too much, it may make her liable to a fever, and increaſe the milk to a ſuperfluity, which may be of dangerous conſequence. It is therefore requiſite for the firſt five days eſpecially, that ſhe take moderately panada, broth, poach'd eggs, jelly of chickens and calves feet, and French barley broth, each ſomewhat increaſing the quantity. And, if ſhe intend to be nurſe to her child, ſhe may take a little more than ordinary to increaſe the milk by degrees; which muſt be of no continuance, but drawn off either by the child, or otherwiſe. In that caſe likewiſe, let her have coriander or fennel ſeed boiled in barley broth: and by that means, for the time before-mentioned, let her abſtain from meat. If no fever trouble her, ſhe may drink now and then a ſmall quantity of white wine or claret, as alſo ſyrup of maiden-hair, or any other ſyrup that is of an aſtringent quality, taking it in a little water well boiled. And after the fear of a fever, or contraction of humours to the breaſt is over, ſhe may then be nouriſhed more plentifully with the broth of pullets, capons, pigeons, partridges, mutton, veal, &c. which muſt not be till after eight days at leaſt from the time of the delivery; for by that time the womb will have purged itſelf, unleſs ſome intervening accident ſhould hinder. It will then be expedient to give her cool meats, ſo it be done ſparingly, the better to gather ſtrength; and let her during the time reſt quietly, and free from any diſturbance, not ſleeping in the day time, if ſhe can avoid it. If there happens any obſtructions in the evacuation of excrements, the following clyſters may be adminiſtered: Take pellitory of the wall, and of both the mallows, of each a handful; fennel and anniſeed of each two ounces; boil them in the decoction of a ſheep's head, and take of this three quarters, diſſolving it in the common honey and coarſe ſugar, and of new freſh butter two ounces; ſtrain it well, and adminiſter it clyſter-wiſe. But if this does not operate to your mind, then you may take an ounce of catholicon.

CHAP. IX.

Of a mole or falſe Conception: and of Monſters and Monſtrous Births, with the reaſon thereof.

SECTION I. *Of a Mole or falſe Conception.*

A MOLE or falſe conception is nothing elſe but a maſs or great lump of fleſh, burdening the womb. It is an inarticulate piece of fleſh without any form, and therefore differs from monſters, which are both *formata* and *articulata*; and then it is ſaid to be a conception, but a falſe one which puts a difference between a true conception and a mole; and the difference holds good three different ways: Firſt in the genus, becauſe a mole cannot be ſaid to be an animal. Secondly, it differs in ſpecies, becauſe it hath no human figure, and bears not the character of a man. Thirdly, it differs in the individium, for it hath no affinity with the parts of that in the whole body, or any particles of the ſame. There are variety of judgments among authors about the producing cauſe of this effect, ſome affirming that it is produced by the woman's ſeed going into the womb without the man's: but becauſe we have before proved that women have properly no ſeed at all, but only an ovalium, which is fœcundated by the active principle of the man's ſeed, this opinion needs no confutation. Others ſay, it is engendered of the menſtruous blood: but were this granted, it would follow that maids by having their courſes ſtopped might be ſubject to the ſame, which never any yet were. The true cauſe of this carnous conception, which we call a mole proceeds both from the man and the woman, from corrupt and barren ſeed in the man, and from the menſtruous blood in the woman, both mixed together in the cavity of the womb; and nature finding herſelf weak (yet deſirous of maintaining the perpetuity of her ſpecies) labours to bring forth a vicious conception rather than none: and not being able to bring forth a living creature generates a piece of fleſh.

This imperfect conception may be known to be ſuch by the following ſigns. The monthly courſes are ſuppreſſed, the belly is puffed up, and waxed hard, the breath ſmells and the appetite is depraved. But you will ſay, theſe are ſigns of a breeding woman in true conception, and therefore theſe cannot diſtinguiſh a mole. To this I anſwer, Though thus they agree, yet they are different in ſeveral reſpects; for a mole may be felt in the womb before the third month, which an infant cannot; the motion of the mole being only cauſed by the faculty of the womb and of the ſeminal ſpirit diffuſed through its ſubſtance; for though this has no animal, yet it has a vegetative life; and then the belly is ſuddenly ſwelled where there is a mole; but in true conception the belly is firſt contracted, and then riſeth gradually. Another difference is, the belly being preſſed with the hand, the mole gives way, and the hand being taken away, it returns to the place again; but a child in the womb though preſſed with the hand, moves not preſently, and being removed returns not at all, or at leaſt very ſlowly. But, to name no more, another very material difference is, that a child continues not in the womb above eleven months at moſt; but a mole ſometimes continues four or five years, ſometimes more or leſs, according to its being faſtened to the matrix; for ſometimes a mole hath fallen away in four or five months; and if it remains until the 11th month, the legs are feeble, and the whole body appears in a waſting

condition, or the belly ſwells bigger and bigger, which is the reaſon that ſome who are thus afflicted, think they are hydropical, though it be no ſuch thing; which a woman eaſily knows, if ſhe will but conſider that in a dropſy the legs will ſwell and grow big; in caſe of a mole they conſume and wither. This diſtemper is an enemy to true conception, and of dangerous conſequence; for a woman that breeds a mole is every way more inconvenienced than a woman that is with child, and all the while ſhe keeps it, ſhe lives in danger of her life.

The cure of this diſtemper conſiſts chiefly in expelling it as ſoon as may be; for the longer it is kept the worſe it is: and this many times cannot be effected without manual operation; but that being the laſt remedy, all other means ought to be firſt uſed. Amongſt which phlebotomy ought not to be omitted; for ſeeing letting of blood cauſeth abortion, by reaſon it takes away that nouriſhment that ſhould ſuſtain the life of the child, why may not this vicious conception be by the ſame means deprived of that vegetative ſap by which it lives? to which end open the liver vein, and the ſaphana in both feet; faſten the cupping glaſſes to the loins and ſides of the belly; which done, let the urinary part be firſt molified, and the expulſive faculty be provoked to expel the burden. And to looſen the ligatures of the mole, take mallows with roots, three handfuls; pellitory, camomile, violet leaves, melilot, roots of fennel, parſley, mercury, of each two handfuls; fenugreek and lintſeed, of each one pound; boil them in water, and make a bath thereof, and let her ſit therein up to her navel. At her going out of the bath, let her reins and privities be anointed with this unguent: Take ammoniati, landani, freſh butter, of each an ounce; and with the oil of lintſeed make an ointment; or, inſtead of this, may be uſed unguentum agrippæ or dialthæ. Alſo take aq. bryonæ compoſito roots of althæ and mercury, of each a handful; lintſeed and barley meal, of each ſix ounces; boil all theſe with water and honey, and make a plaiſter, and the ligaments of the mole being thus looſened, let the expulſive faculty be ſtirred up to expel the mole; for the effecting of which, all thoſe medicines are very proper which bring down the courſes. Therefore take ſavine, madder, valerian, horehound, ſage, hyſſop, betony, pennyroyal, calamint, hypericon, and with water make a decoction, and give three ounces of it, with an ounce and a half of ſyrup of feverfew. But if theſe remedies prove not available, then muſt the mole be drawn away by manual operation, in the manner following: Let the operator (having placed the woman in a proper poſture, as has been directed in caſes of unnatural labour) ſlide his hands into the womb, and with it draw forth the mole; but if it be grown ſo big that it cannot be drawn away whole (which is very rare, becauſe it is a ſoft tender body, and much more pliable than a child) let the operator bring it away by parts, by uſing a crochet or knife, if it cannot be done otherwiſe. And if the operator finds it is joined and faſtened to the womb, he muſt gently ſeparate it with his fingers' ends, his nails being pared, putting them by little and little between the mole and the womb, beginning on the ſide where it does ſtick faſt, and ſo purſue it till it be quite looſened, taking great care if it grows too faſt not to rend or hurt the proper ſubſtance of the womb, proceeding as in the caſe of an after-burden, that ſtays behind in the womb when the ſtring is broken off: but a mole has never any ſtring faſtened to it, or any burden whence it ſhould

receive any nouriſhment, but does of itſelf immediately draw it from the veſſels of the womb. And thus much ſhall ſuffice to be ſaid concerning a mole; of which I have ſhewn the cauſe, the ſigns, and the cure.

SECTION II. *Of Monſters and monſtrous Births.*

Monſters are properly depraved conceptions, and are deemed by the ancients to be excurſions of nature, and are always vicious either by figure, ſituation, magnitude, or number.

They are vicious in figure, when a man bears the character of a beaſt; vicious in magnitude, when the parts are not equal, or one part is bigger than another; and this is a thing very common, by reaſon of ſome excreſcence. They are vicious in ſituation many ways; as if the ears were on the face or the eyes on the breaſts, or on the legs, as were ſeen in a monſter born at Ravenna in Italy, in the year 1570: And laſtly, vicious in number, when a man hath two heads, four hands, and two bodies joined, which was the caſe of the monſter born at Zazara in the year 1550.

As to the cauſe of their generation, it is either divine or natural. The divine cauſe proceeds from the permiſſive will of the great Author of our being, ſuffering parents to bring forth ſuch deformed monſters, as a puniſhment for their filthy and corrupt affection, let looſe unto wickedneſs, like brute beaſts that have no underſtanding: for which reaſon the ancient Romans enacted, that thoſe who were deformed ſhould not be put into religious houſes. And St. Jerome, in his time grieved to ſee the deformed and lame offered up to God in religious houſes; and Keckerman, by way of inference, excluded all that were miſhapen, becauſe outward deformity of body is often a ſign of the pollution of the heart, as a curſe laid upon the child for the incontinency of the parents: Yet there are many born depraved, which ought not to be aſcribed to the infirmity of the parents. Let us therefore ſearch out the natural cauſe of their generation, which according to thoſe who have dived into the ſecrets of nature, is either in the matter or the agent, in the ſeed, or in the womb. The matter may be in fault two ways, by defect or acceſs. By defect, when the child hath but one arm or leg, &c. by acceſs, when it has three hands or two heads. Some monſters are alſo begotten by women's beſtial and unnatural coition, &c. The agent or womb may be in fault three ways: firſt, in the forming faculty, which may be too ſtrong or too weak, which ſometimes produces a depraved figure. 2dly. The evil diſpoſition of the inſtrument or place of conception, will cauſe a monſtrous birth. And 2dly, the imaginative power at the time of conception, is of ſuch a force as to ſtamp a character of the thing imagined upon the child; thus a woman at the time of conception, beholding the picture of a Blackamoor, conceived and brought forth a child reſembling an Ethiopian; and by this the children of an adultreſs, though begotten by another man, may have the neareſt reſemblance to her own huſband. This power of imagination was well enough known to the ancients, as is evident by the example of Jacob, the father of the twelve tribes of Iſrael, who having agreed with his father in-law to have all the ſpotted ſheep for the keeping of his flock to increaſe his wages, took hazel rods, peeling them with white ſtreaks in them, and laid them before the ſheep when they came to drink, and they coupling together whilſt they beheld the rods, conceived and brought

forth ſpotted young. Nor does the imagination work in the child at the time of conception only, but afterwards alſo; as was ſeen in the example of a worthy gentlewoman, who being big with child, and paſſing by a butcher killing meat, a drop of blood ſpirted on her face; whereupon ſhe preſently ſaid that the child would have ſome blemiſh on his face, which proved true, for at the birth it was found marked with a red ſpot.

But beſides the way already mentioned, Monſters are ſometimes produced by other means, to wit, by the undue coition of a man and his wife when her monthly flowings are upon her; which being a thing againſt nature, no wonder that it ſhould produce an unnatural iſſue. If therefore a man's deſire be ever ſo great for coition (as ſometimes it is after long abſence) yet if a woman knowe that the cuſtom of women is upon her, ſhe ought not to admit of any embraces, which at that time are both unclean and unnatural. The iſſue of theſe unclean embraces proving often monſtrous, as a juſt puniſhment for ſuch a turpidinous action. Or, if they ſhould not always produce monſtrous births, yet are the children thus begotten, for the moſt part, dull, heavy, ſluggiſh, and defective in underſtanding, wanting the vivacity and livelineſs which thoſe children are endued with who are begotten when women are free from their courſes.

There has been ſome contending among authors, whether thoſe who are born monſters have reaſonable ſouls, the reſult of both ſides, at laſt coming to this, that thoſe who, according to the order of nature, are deſcended from our firſt parents by the coition of a man and woman, though their outward ſhape be deformed and monſtrous, have notwithſtanding reaſonable ſouls: but thoſe monſters that are not begotten by man, but are the product of a woman's unnatural luſt, copulating with other creatures, ſhall periſh as the brute beaſts by whom they were begotten, nor have they a reaſonable ſoul. The ſame being alſo true of imperfect and abortive births.

Some are of opinion, that monſters may be engendered by infernal ſpirits; but notwithſtanding Ægidius Facias pretended to believe it with reſpect to a deformed monſter, born at Cracovia: and Hieronimus Carcomus writeth of a maid that was got with child by the devil; yet, as a wicked ſpirit is not capable of having human ſeed, how is it poſſible he ſhould beget a human creature? If they ſay, that the devil may aſſume to himſelf a dead body, and enliven the faculties of it, and thereby make it able to generate, I anſwer, that though we ſuppoſe this could be done, which I believe not, yet that body muſt bear the image of the devil; and it borders upon blaſphemy, to think that the all-wiſe and good Being would ſo far give way to the worſt of ſpirits as to ſuffer him to raiſe up his diabolical offſpring: for, in the ſchool of nature, we are taught the contrary, viz. that like begets like; whence it follows, that a man cannot be born of a devil.

The firſt that I ſhall preſent is a moſt frightful monſter indeed, repreſenting an hairy child. It was covered over with hair like a beaſt. That which rendered it yet more frightful was, that its navel was in the place where his noſe ſhould ſtand, and his eyes placed where his mouth ſhould have been, and his mouth was in the chin. It was of the male kind, and born in France in the year 1597.

A boy was born in Germany, with one head and one body, but having four ears, four arms, four thighs, four legs, and four feet.

This birth, the learned who beheld it, judged to proceed from the redundance of the feed; but there not being enough for Twins, nature formed what she could, and so made the most of it.

This child lived ſome years, and though he had four feet, he knew not how to go; by which we may ſee the wiſdom of nature, or rather the God of nature, in the formation of the body of man.

Heav'n in our firſt formation did provide
Two arms and legs; but what we have beſide
Renders us monſtrous and unſhapen too,
Nor have we any work for them to do.
Two arms, two legs, are all that we can uſe,
And to have more there's no wiſe man will chuſe.

In the time of Henry III. a woman was delivered of a child, having two heads and four arms, and the reſt was a twin under the navel; and then beneath, all the reſt was ſingle, as appears in the figure. The heads were ſo placed that they looked contrary ways, and each had two diſtinct arms and hands. They would both laugh, ſpeak, cry, and both eat and be hungry together. Sometimes the one would ſpeak, and the other would keep ſilence, and ſometimes both would ſpeak together. It was of the female ſex; and though it had two mouths, and did eat with both, yet there was but one fundament to diſburden nature. It lived ſeveral years, but the one outlived the other three years, carrying the dead one (for there was no parting them) till the other fainted with the burden, and more with the ſtink of the dead carcaſs.

A child was born in Flanders which had two heads and four arms, seeming like two girls joined together, having two of their arms lifted up between and above their heads; the thighs being placed as it were across one another according to the figure. How long they lived I had no account of.

Nature to us sometimes does Monsters show,
That we by them may our own mercies know;
And thereby sin's deformity may see
Than which there's nothing can more monstrous be.

Ariſtotle's Maſter-Piece.

PART III.

Displaying the Secrets of Nature relating to PHYSIOGNOMY.

CHAP. I.

Section I.

Of Phyſiognomy, ſhewing what it is, and from whence it is derived.

PHYSIOGNOMY is an ingenious ſcience, or knowledge of nature, by which the inclination and diſpoſitions of every creature are underſtood: and becauſe ſome of the members are uncompounded and entire of themſelves, as the tongue, the heart, &c. and ſome of a mixed nature, as the eyes, the noſe, and others, we therefore ſay, that there are many ſigns which agree and live together, which inform a wiſe man how to make his judgment, before he be too raſh to deliver it to the world. Nor is it to be eſteemed a foolish or idle art, ſeeing it is derived from the ſuperior bodies; for there is no part of the face of a man, but what is under the peculiar influence or government, not only of the ſeven planets, but alſo of the twelve ſigns of the zodiac; and the diſpoſition, vices, virtues, and fatality either of a man or woman, are plainly foretold, if the perſon pretending to the knowledge thereof be an artiſt, which, that my reader may attain to, I ſhall ſet theſe things in a clear light.

The reader ſhould remember that the forehead is governed by Mars; the right eye is under the dominion of Sol; the left is ruled by Luna or the Moon; the right ear is the care of Jupiter; the left of Saturn; the rule of the noſe is claimed by Venus, which by the way is one reaſon that, in all unlawful venereal encounters, the noſe is too ſubject to bear the ſcars which are gotten in thoſe wars: and the nimble Mercury, the ſignification of eloquence, claims the dominions of the mouth, and that very juſtly.

Thus have the ſeven planets divided the face among them but not ſo abſolutely, but that the twelve ſigns of the zodiac do alſo come in for a part: and therefore the ſign Cancer preſides in the uppermoſt part of the forehead; Leo attends upon the right eye brow, as Sagitarius does upon the right eye, and Libra upon the right ear; upon the left eye and eye brow Aquarius and Gemini, and Aries the left ear; Tarrus rules in the middle of the forehead, and Capricorn the chin: Scorpio takes upon him the protection of the noſe; Virgo claims the precedence of the right cheek, and Piſces of the left. And thus the face of man is canton'd out among the Signs and Planets; which being carefully attended to, will ſufficiently inform the artiſts how to paſs a judgment; For, according to the Sign or Planet ruling, ſo alſo is the judgment to be of the part ruled, which all thoſe that have underſtanding know eaſily how to apply.

In the judgment that is to be made from phyſiognomy, there is a great difference betwixt a man and a woman, becauſe in reſpect of

the whole compoſition, men more fully comprehend it than women do, as will appear in the following ſection: Therefore the judgments we paſs properly concern a man, as comprehending the whole ſpecies, and but improperly the woman, as a part thereof, and derived from the man; and therefore in the judgment about the lines and marks of a face, reſpect ſhould be had to the ſex; for when we behold a man whoſe face is like unto a woman's; or the face of a woman, who in reſpect to her fleſh and blood is like unto a man, the ſame judgment is not paſſed on her, as on a man that is like unto her, in regard that the complexion of the woman is much different from that of a man, even in thoſe reſpects which are ſaid to be common; therefore reſpect ſhould be had to other parts of the body, as the hands, &c. Now in theſe common reſpects, two parts are attributed to a man, and a third part to a woman.

Wherefore, it being our intention to give you an exact account, according to the rules of phyſiognomy, of all and every part of the members of the body we will begin with the head, as it hath relation only to a man and woman, and not any other creature that the work may be more obvious to every reader.

CHAP. II.

Of the Judgment of Phyſiognomy.

HAIR that hangs down without curling, if it be of a fair complexion, thin and ſoft, ſignifies a man to be naturally faint-hearted, and of a weak body, but of a quiet and harmleſs diſpoſition. Hair that is big and thick and ſhort denotes a man to be of a ſtrong conſtitution, bold, ſecret, deceitful, and, for the moſt part unquiet, and vain, luſting after beauty, and more fooliſh than wiſe, though fortune may favour him. He whoſe hair is partly curled and partly hanging down, is commonly a wiſe man or a very great fool, or elſe a knave. He whoſe hair groweth thick on his temples and his brow, one may at firſt ſight certainly conclude that ſuch a man is by nature ſimple, vain, luxurious, luſtful, credulous, clowniſh in his ſpeech and converſation, and dull in his apprehenſion. He whoſe hair not only curls very much, but buſheth out, and ſtands on end, if the hair be white, or yellowiſh, he is by nature proud and bold, dull of apprehenſion, ſoon angry, a lover of venery, given to lying, malicious, and ready to do any miſchief. He whoſe hair riſes in the corners of his temples, and is alſo groſs and rough, is a man highly conceited of himſelf, inclined to malice, but cunningly conceals it, is very courtly, and a lover of new faſhions. He who hath much hair, that is, whoſe hair is thick all over his head, is naturally vain and very luxurious, of a good digeſtion, eaſy of belief and ſlow of performance, of a weak memory, and for the moſt part unfortunate. He whoſe hair is of a reddiſh complexion, is for the moſt part, if not always, proud deceitful, detracting, venerious, and full of envy. He whoſe hair is extraordinary fair, is, for the moſt part, a man fit for all praiſe-worthy enterpriſes, a lover of honours, and much more inclined to do good than evil; laborious and careful to perform whatever is committed to his care; ſecret in carrying on any buſineſs, and fortunate. Hair of a yellowiſh colour ſhews a man to be good-conditioned, and willing to do any thing, fearful, ſhamefaced, and weak of body, but ſtrong in the abilities of his mind, and more apt to remember than revenge an injury. He whoſe hair is of a browniſh

colour, and curled a little, is a well diſpoſed man, inclined to that which is good, a lover of peace, cleanlineſs and good manners. He whoſe hair turns gray or hoary, in the time of his youth, is generally given to women, vain, falſe, unſtable and talkative.

NOTE, That whatſoever ſignification the hair has in men, it hath the ſame in women alſo.

Thus does wiſe Nature make our very hair
Shew all the paſſions that within us are;
If to the bottle we are moſt inclin'd,
Or, if we fancy moſt the female kind;
If into virtue's paths our minds we bend,
Or, if to vicious ways our footſteps tend,
A ſkilful artiſt can unfold the ſame,
And from our hair, a certain judgment frame:
But ſince our periwigs are come in faſhion,
No room is left for ſuch an obſervation.

The forehead that riſeth in a round, ſiginfies a man liberally merry, of a good underſtanding, and generally inclined to virtue. He whoſe forehead is fleſhy, and the bone of the brow jutting out, and without wrinkles, is a man inclined to ſuits of law, contentious, vain, deceitful, and addicted to follow ill courſes. He whoſe forehead is very low and little, is of a good underſtanding, magnanimous, but extremely bold and confident, and a great pretender to love and honour. He whoſe forehead ſeems ſharp, and pointing up in the corners of his temples, ſo that the bone ſeems to jut forth a little, is a man naturally weak and fickle, and weak in his intellectuals. He whoſe brow upon the temple is full of fleſh is a man of great ſpirit, proud, watchful, and of groſs underſtanding. He whoſe brow is full of wrinkles, and hath as it were a ſeam coming dawn the middle of the forehead, is one that is of a great ſpirit, a great wit, void of deceit, and yet of hard fortune. He who has a full large forehead, and a little round, deſtitute of hair, or at leaſt has little hair on it, is bold, malicious, high ſpirited, full of choler, and apt to tranſgreſs beyond all bounds, and yet of a good wit. He whoſe forehead is long and high, jutting forth, and whoſe face is figured almoſt ſharp and picked towards the chin, is one reaſonably honeſt but weak and ſimple, and of hard fortune.

Who view men well may on their vices hit,
For ſome men's crimes are on their foreheads writ;
But the reſolved man outbraves his fate,
And will be good, although unfortunate.

The eye-brows that are much arched, whether in man or woman, and which, by frequent motion, elevate themſelves, ſhew the perſon to be proud, high ſpirited, vain-glorious, bold and threatening, a lover of beauty, and indifferently inclined either to good or evil. He whoſe eye-lids bend downward when he ſpeaks to another man, or looks upon him, and who has a kind of a ſkulking look, is by nature a penurious wretch, cloſe in all his actions, of few words, but full of malice, He whoſe eye brows are thick; and have but little hair upon them, is weak and credulous, very ſincere, ſociable, and deſirous of good company. He whoſe brows are folded and the hair thick, and bending downwards, is one that is clowniſh, heavy, ſuſpicious, miſerable, envious, and will cheat and cozen you if he can. He whoſe eye-brow hath but ſhort hair, and of a whitiſh colour, is fearful, eaſy of belief

and apt to undertake any thing. Thoſe whoſe eye-brows are black, and the hair of them thin, will do nothing without great conſideration, is bold and conſident of the performance of what he undertakes, and is not apt to believe any thing without reaſon for ſo doing.

Thus by the eye-brows women's minds we know,
Whether they're white or black, or quick, or ſlow:
And whether they'll be curſed or be kind,
By looking in their eye-brows we may find.

If the ſpace between the eye-brows be of more than ordinary diſtance, it ſhews the perſon to be hard hearted, envious, cloſe and cunning, apprehenſive, greedy of novelties, addicted to cruelty more than love. But thoſe men whoſe eye-brows are at a leſſer diſtance, are for the moſt part of a dull underſtanding, yet ſubtle enough in their dealings, and of an uncommon boldneſs, which is often attended with great felicity; but above all, they are moſt ſure and conſtant in their friendſhip.

Great and full eyes either in men or women, ſhew the perſon to be for the moſt part ſlothful, bold, envious, a bad concealer of ſecrets, miſerable, vain, given to lying, and yet of a bad memory, ſlow in invention, weak in his intellectuals, and yet very conceited of his abilities. He whoſe eyes are hollow in his head, and therefore diſcerns excellently well at a great diſtance, is one that is ſuſpicious, malicious, furious, perverſe in his converſation, of an extraordinary memory, bold, cruel, and falſe, both in words and deeds, proud, threatening, vicious, envious, and treacherous: But he whoſe eyes are as it were ſtarting out of his head, is a ſimple fooliſh perſon, ſhameleſs, very ſervile, and eaſy to be perſuaded either to vice or virtue. He who looks ſtudiouſly with his eyes downwards, is of a malicious nature, very treacherous, unfaithful, envious, miſerable, impious towards God, and diſhoneſt towards men. He whoſe eyes are ſmall, and conveniently round is baſhful and weak, very credulous, liberal to others, and even in his converſation. He whoſe eyes look on a ſquint, is deceitful, unjuſt, envious, furious, a great liar, and as the effect of all this, miſerable. A wandering eye rolling up and down, denotes a vain ſimple man, luſtful, treacherous. He or ſhe whoſe eyes are twinkling, and which move forward or backward, ſhew the perſon to be luxurious, unfaithful, preſumptuous, treacherous, and hard to believe any thing that is ſpoken. If a perſon has any greenneſs mingled in the white of his eyes, ſuch is commonly ſilly and often very falſe and deceitful, unkind to his friends, a great concealer of his own ſecrets, and very choleric. Thoſe whoſe eyes roll up and down, or thoſe who ſeldom move their eyes, but when they do draw them inwardly, and faſten them upon ſome object, ſuch are by their inclinations very malicious, vain-glorious, ſlothful, unfaithful, envious, falſe and contentious. They whoſe eyes are addicted to blood ſhot, are naturally cholerick, proud diſdainful, cruel, ſhameful, perfidious, and much inclined to ſuperſtition. They who have eyes like oxen, are perſons of good nutriment, but of a weak memory, dull underſtanding, and ſilly in their converſation: But they whoſe eyes are neither too little nor too big, and inclined to a black, do ſignify a man mild, peaceable, honeſt, witty, and of a good underſtanding; and one that when need requires will be ſerviceable to his friends.

Thus from the eyes we several things may see,
By nature's art of physiognomy,
That no man scarce can make a look awry,
But we thereby some secret symptoms may
Discern of his intention, and foresee
Unto what paths his steps directed be;
And this may teach us goodness more to prize,
For where one's good, there's twenty otherwise.

A long and thin nose denotes a man bold, curious, angry, weak and credulous; easy to be persuaded either to good or evil. A long nose and extended, its tip bending downwards shews the person to be wise, discreet, officious, honest and faithful, and who will not be easily overreached. A bottle nose denotes a man to be impetuous in the obtaining his desires, vain, false, luxurious, weak, credulous. A nose broader in the middle, and less towards the end, denotes a vain talkative person, a liar and one of hard fortune. He who hath a long and great nose, is an admirer of the fair sex, well accomplished for the wars of Venus, but ignorant of any thing that is good; assiduous in obtaining what he desires; and though very ignorant, would fain be thought very knowing. A nose sharp on the tip of it, and neither too long nor too short, too thick nor too thin denotes the person, if a man, to be of a fretful disposition, always pining and peevish; and if a woman, a scold, contentious, wedded to her own humour; and if married a plague to her husband. A nose very round at the end of it, and having but little nostrils, shews a person to be munificent and liberal, true to his trust, but credulous, proud and vain. A nose very long and thin at the end of it, and something round, signifies one bold in his discourse, honest in his dealings, patient in receiving, and slow in offering injuries, but yet privately malicious. He whose nose is naturally more red than any other part of his face, is denoted to be covetous, luxurious, and an enemy to goodness. A nose that turns up again, and is long and full on the tip of it, shews the person to be bold, proud, covetous, envious, a liar and deceiver, vain-glorious, contentious, and unfortunate. He whose nose riseth high in the middle, is prudent, politic, courageous, honourable in his actions and true to his word. A nose big at the end shews a person to be of a peaceful disposition, industrious, faithful, and of a good understanding. A very wide nose, with wide nostrils, denotes a man full of apprehension, and inclined more to simplicity than wisdom, and withal contentious, vain-glorious and a liar.

Thus from the nose our physiognomist
Can smell men's inclinations if we list:
And from its colour and its make,
Of vice and virtue a survey can take.

When the nostrils are close and thin, they denote a man to have but little testicles, and to be very desirous of the enjoyment of women, but modest in his conversation. But he whose nostrils are great and wide, is usually well hung, and lustful; but of an envious, bold, and treacherous disposition; and though dull of understanding, yet confident.

Thus those who chiefly mind the brutal part,
May learn to chuse a husband by this art.

A great wide mouth shews a man to be bold, warlike, shameless, stout, a great liar, talkative, and a great eater, but dull as to his intel-

lects. A little mouth shews the person to be of a quick and pacific temper, somewhat fearful, but faithful, secret, modest, bountiful, and a little eater. He whose mouth smells of a bad breath, is one of a corrupted liver or lungs is sometimes vain, wanton, deceitful, of indifferent intellects, envious, covetous and a promise breaker. He that has a sweet breath, is the contrary.

Thus from the mouth itself, we likewise see
What signs of good and bad may gather'd be;
For, let the wind blow east, west, north or south,
Both good and bad proceed out of the mouth.

The lips when they are very big and blubbering, shew a person to be credulous, foolish, dull and stupid, and apt to be enticed to any thing. Lips of a different size, denote a person to be discreet, secret, judicious, of a good wit but somewhat hasty. To have lips well coloured, and more thin than thick, shews a person to be good humoured, and more easily persuaded to good than evil. To have one lip bigger than the other, shews variety of fortunes, denotes a dull sluggish temper, and an indifferent understanding.

The lips they so much dote on for a kiss,
Oft tell fond lovers when they do amiss.

When the teeth are small, and but weak in performing their office, and especially if they be short and few, though the party be of a weak constitution, yet they denote him to be of a meek disposition, honest, faithful, and secret in whatsoever he is entrusted with. To have some teeth longer, and some shorter than others, denotes a person to be of a good apprehension, but bold, disdainful, envious and proud. To have teeth very strong, and growing sharp towards the end, if they are long in chewing, and thin, denotes the person to be envious, gluttonous, bold, shameless, unfaithful and suspicious. When the teeth look very brown or yellowish, whether they be long or short, it shews the person to be of a suspicious temper, envious, deceitful and turbulent. To have teeth strong and close together, shews the person to be of a long life, a desirer of novelties, and things that are fair and beautiful, but of an high spirit, and one that will have his humour in all things; he loves to hear news, and afterwards to repeat it, and is apt to entertain any thing in his own behalf. To have teeth thin and weak, shews a weak, feeble man, and one of short life, and of a weak apprehension; but chaste, shamefaced, tractible and honest.

Thus from the teeth the learned can portend
Whether men's steps to vice or virtue bend.

A tongue too swift in speech, shews a man to be downright foolish, or at best but a very vain wit. A stammering tongue, or one that stumbles in the mouth, signifies a man of a weak understanding, of a wavering mind, quickly in a rage, and soon pacified. A thick and rough tongue denotes a man to be apprehensive, subtle and full of compliments, yet vain and deceitful, treacherous and prone to impiety. A thin tongue shews a man of wisdom and sound judgment, very ingenious, and of an affable disposition, yet sometimes timorous, and too credulous.

No wonder 'tis that from men's speech we see
Whether they're wise, or whether foolish be:
But from a silent tongue our authors tell
The secret passions within men that dwell.

A great and full voice in either ſex, ſhew them to be of a great ſpirit, confident, proud and wilful. A faint or weak voice, ſhews a perſon of a good underſtanding, nimble fancy, a little eater, but weak of body and timorous. A loud and ſhrill voice, denotes one ſagacious and ingenious, but capricious, vain-glorious, and too credulous. A ſtrong voice when a man ſings, denotes a ſtrong conſtitution, a good underſtanding, ingenious, amorous. A weak and trembling voice, denotes one to be envious, ſuſpicions, ſlow in buſineſs, and fearful. A loud, ſhrill and unpleaſant voice, ſignifies one bold and valiant, but quarrelſome, injurious, and wedded to his own humour. A rough and hoarſe voice, declares one to be a dull and heavy perſon, of much guts and little brains. A full and yet mild voice, and pleaſing to the hearer, ſhews a perſon to be quiet and peaceable, thrifty and ſecret, not prone to anger. A voice beginning low or in the baſs, and ending high in the treble, denotes a perſon to be violent, angry, bold, ſecure.

Thus by our voice 'tis to an artiſt known
Unto what virtue or to what vice we're prone;
And he that of a good wife will make choice,
May chuſe her by obſerving of her voice.

A thick and full chin, abounding with fleſh, ſhews a man inclined to peace, honeſt, but ſlow in invention, and eaſy to be drawn to good or evil. A picked chin, reaſonably full of fleſh, ſhews a good underſtanding, a high ſpirit, and laudable converſation. A double chin, ſhews a peaceable diſpoſition, but dull apprehenſion, vain, credulous, and ſecret in his actions. A crooked chin, bending upwards, and picked for want of fleſh, is, according to nature, a very bad man, proud, impudent, envious, threatening, deceitful, prone to anger and treachery, and a great thief.

Thus, from the forehead to the chin, we've ſhown
How mankind's inclinations may be known;
From which th' obſerving reader ſtill muſt find
We're more to evil, than to good inclin'd.

Young men uſually have hair to begin to grow upon their chins at 15 years of age, and ſometimes ſooner. Theſe hairs proceed from the ſuperfluity of heat, the fumes whereof aſcend to their chins, like ſmoke to the funnel of a chimney; becauſe it can find no open paſſage by which it may aſcend higher, it vents itſelf in hairs which are called the beard. There are few women that have hair on their cheeks, and the reaſon is, thoſe humours which cauſe hair to grow on the cheeks of a man, are evacuated by women in their monthly courſes, which they have more or leſs, according to the heat or coldneſs of the conſtitution: Yet ſometimes women of a hot conſtitution have hair on their cheeks, but more commonly on their lips, or near their mouths where the heat moſt aboundeth: And ſuch women are much addicted to the company of men, and of a ſtrongly and manly conſtitution. A woman who hath little hair on her cheeks, or about her mouth and lips, is of good complexion, weak conſtitution, ſhame-faced, mild and obedient; whereas a woman of a more hot conſtitution is otherwiſe. But in a man, a beard well compoſed and thick of hair, ſignifies him good-natured, honeſt, loving, ſociable and full of humanity; on the contrary, he that hath little beard, is, for the moſt part, proud, pining, peeviſh and unſociable. They who have no beards, have always ſhrill and ſtrange ſqueaking voices, are of a weak con-

ſtitution, as is apparent in the caſe of eunuchs, who, after they are deprived of their virility, are transformed from the nature of men into the condition of women.

Of men and women's beards I might ſay more,
But prudence bids me this diſcourſe give o'er.

Great and thick ears are certain ſigns of a fooliſh perſon, of a bad memory, and worſe underſtanding; but ſmall and thin ears ſhew a perſon to be of good wit, grave, ſecret, thrifty, modeſt, of good memory, and willing to ſerve his friend. Ears longer than ordinary ſignify a bold man, uncivil, vain, fooliſh, of ſmall induſtry, but a great ſtomach.

Who his juſt praiſe unwillingly does hear,
Shews a good life, as well as a good ear.

A face apt to ſweat on every motion ſhews the perſon to be of a hot conſtitution, vain, luxurious, of a good ſtomach, but bad underſtanding, and a worſe converſation. A very fleſhy face, denotes a fearful diſpoſition, a merry heart, bountiful and diſcreet, eaſy to be entreated, and apt to believe every thing. A lean face denotes a good underſtanding, but ſomewhat capricious and diſdainful in his converſation. A little round face ſhews a perſon to be ſimple, fearful, of a bad memory, and a clowniſh diſpoſition. A plump face and full of carbuncles, ſhews a man to be a great drinker, vain and daring. A face red and high coloured, ſhews a man to be choleric, and not eaſily pacified. A long and lean face, ſhews one to be bold in ſpeech and action, but fooliſh, quarrelſome, proud and injurious. A face every way of a due proportion, denotes an ingenious perſon, fit for any thing, and well inclined. A broad full fat face, ſhews a dull heavy conſtitution, and that for one virtue has three vices. A plain flat face, without any riſing, ſhews a perſon to be very wiſe, loving, and courtly, faithful to his friend, and patient in adverſity. A face ſinking down a little, with creaſes in it, inclining to leanneſs denotes a perſon to be laborious, but envious, deceitful, falſe, quarrelſome, vain, filly and clowniſh. A face of a handſome proportion, and more inclining to fat than lean, ſhews a perſon juſt in his actions, true to his word, civil and reſpectful, and of an extraordinary memory. A crooked face, long and lean denotes a man endued with as bad qualities as the face is with ill features. A face broad about the brows, and ſharper and leſs towards the chin, ſhews a man ſimple and fooliſh, vain, envious, deceitful and quarrelſome. A face well coloured, full of good features, of an exact ſymmetry and juſt proportion, is commonly the index of a fairer mind, and ſhews the perſon to be well diſpoſed; but yet virtue is not ſo impregnably ſeated there, but that by ſtrong temptation, eſpecially of the fair ſex, it may be ſupplanted and overcome by vice. A pale complexion, ſhews the perſon not only to be fickle, but malicious, treacherous, proud, and extremely unfaithful. A face well coloured ſhews the perſon to be of a praiſe-worthy diſpoſition, ſound complexion, eaſy of belief, reſpectful to his friends, ready to do a courteſy, and very eaſy to be drawn to any thing.

Thus phyſiognomy readeth in each face
What vice or virtue we're moſt prone t' embrace;
For in man's face there hardly is a line
But of ſome inward paſſion 'tis a ſign;

And he that reads this section o'er may find
The fairest face has still the clearest mind.

A great head, and round withal, denotes a perſon to be ſecret, ingenious, laborious, conſtant and honeſt. The head whoſe gullet ſtands forth, and inclines towards the earth, ſignifies a perſon thrifty, wiſe, peaceable, ſecret, of a retired temper, and conſtant in the management of his affairs. A long head and face, and great withal, denotes a vain, fooliſh and idle perſon, credulous and envious. To have one's head always ſhaking and moving from ſide to ſide, denotes a ſhallow, weak, unſtable perſon, given to lying, a great talker, and prodigal in all his fortunes. A big and broad face, ſhews a man to be courageous, a great hunter after women, ſuſpicious, bold, and ſhameleſs. A very big head, but not ſo proportionate to the body, and a ſhort neck and gullet, denotes a man of apprehenſion, wiſe, ingenious, of ſound judgment, faithful, true, and courteous to all. He is weak, yet apt to learn, but unfortunate in his actions. And ſo much ſhall ſuffice with reſpect to judgment from the head and face.

CHAP. III.

Of Judgment drawn from ſeveral parts of Man's Body, &c.

IN the body of a man, the head and face are the principal parts, being the index which heaven has laid open to every one's view, to make a judgment therefrom, therefore I have been the larger in my judgment from the ſeveral parts thereof. But as to the other parts not ſo obvious to the eyes, I ſhall be much more brief; yet I would proceed in order.

The throat, if it be white, whether it be fat or lean, ſhews a man to be vain-glorious, timorous, wanton, and much ſubject to choler. If the throat be ſo thin and lean that the veins appear, it ſhews a man to be weak, ſlow, and of a dull and heavy conſtitution.

A long neck ſhews one to have a long and ſlender foot, and that he is ſtiff and inflexible. A ſhort neck ſhews one to be witty and ingenious, but deceitful and inconſtant, and a great lover of peace and quietneſs.

A lean ſhoulder-bone ſignifies a man to be weak, timorous, peaceful, not laborious, and yet fit for any employment. Large ſhoulder-bones denote a ſtrong man, faithful, but unfortunate; ſomewhat dull of underſtanding, laborious, contented, a great eater and drinker. He whoſe ſhoulder-bone ſeems to be ſmooth, is modeſt and temperate. He whoſe ſhoulder-bone bends and is crooked inwardly, is commonly a dull perſon and deceitful.

Long arms hanging down, and touching the knees, denote a man liberal, but vain-glorious, proud and inconſtant. He whoſe arms are very ſhort in reſpect to his body is a man of high and gallant ſpirit, and of a graceful temper. He whoſe arms are full of bones, ſinews and fleſh, is a great deſirer of novelties, credulous and apt to believe every thing. He whoſe arms are very hairy, whether they be lean or fat, is for the moſt part a luxurious perſon, weak in body and mind, very ſuſpicious and malicious. He whoſe arms have no hair on them at all, is of a weak judgment, angry, vain, wanton, credulous, a deceiver, and very apt to betray his deareſt friends.

CHAP. IV.

Of Palmistry, shewing the various Judgments drawn from the hand.

BEING engaged, in this third part, to shew what judgments may be drawn, according to physiognomy, from the several parts of the body, and coming in order to speak of the hands, it has put me under the necessity of saying something about palmistry, which is a judgment made of the conditions, inclinations and fortunes of men and women, from the various lines and characters nature has imprinted in their hands, which are almost as various as the hands that have them.

The reader should remember that one of these lines of the hand, and which indeed is reckoned the principal is called the line of life: this line incloses the thumb, separating it from the hollow of the hand. The next to it, called the natural line, takes its beginning from the rising of the fore finger, near the line of life, and reaches to the table line, and generally makes a triangle. The table line, commonly called the line of fortune, begins under the little finger, and ends near the middle finger. The girdle of Venus, which is another line so called, begins near the first joint of the little finger, and ends between the fore finger, and the middle finger. The line of death is that which plainly appears in a counter line to that of life, and is called the sister line, ending usually as the other ends; for when the line of life is ended, death comes, and it can go no farther. There are lines in the fleshy part, as in the ball of the thumb, called the Mount of Venus: under each of the fingers are also mounts, each governed by several planets; and the hollow of the hand is called the Plain of Mars: Thus,

The thumb we to Dame Venus' rule commit,
Jove the fore finger sways as he thinks fit:
Old Saturn does the middle finger guide;
O'er the ring finger Sol does still preside;
The outside drawn, pale Cynthia does direct;
And unto th' hollow Mars does much inspect:
The little finger does to Merc'ry fall,
Which is the nimblest planet of them all.

I proceed to give judgment from the several lines. In Palmistry the left hand is chiefly to be regarded, because therein the lines are most visible, and have the strictest communication with the heart and brain. In the next place, observe the line of life, and if it be fair, extending to its full length, and not broken with an intermixture of cross lines, it shews long life and health; and it is the same if a double line of life appear, as there sometimes does. When stars appear in this line, it signifies great losses and calamities; if on it there be the figures of two G's or a Y, it threatens the person with blindness; if it wraps itself about the table line, it promises wealth and honour to be attained by prudence and industry. If the line be cut, jagged at the upper end, it denotes much sickness; if this line be cut by any lines coming from the Mount of Venus, it declares the person to be unfortunate in love and business also, and threatens him with sudden death. A cross between the line of life and the table line, shews the person to be very liberal and charitable, and of a noble spirit.

The table line, when broad and of a lively colour, shews a healthful constitution, a quiet contented mind, and a courageous spirit; but if it have crosses towards the little finger, it threatens the party with

much affliction by ſickneſs. If the line be double, or divided into three parts at any of the extremities, it ſhews the perſon to be of a generous temper, and a good fortune to ſupport it; but if this line be forked at the end, it threatens the perſon ſhall ſuffer by jealouſies, and loſs of riches gotten by deceit. If three points ſuch as theſe ∴ are found in it, they denote the perſon prudent and liberal, a lover of learning, and of a good temper. If it ſpreads towards the fore and middle finger, and ends blunt, it denotes preferment.

The middle line has in it often very ſignificant characters. Many ſmall lines between this and the table-line threaten the party with ſickneſs, but alſo give him hopes of recovery. A half croſs branching into this line, ſhews honour, riches and good ſucceſs in all undertakings. A half moon denotes cold and watery diſtempers: but a ſun or ſtars promiſes proſperity and riches: This line double, in a woman, ſhews ſhe will have ſeveral huſbands, but no children.

If the line of Venus happens to be cut or divided near the fore finger, it threatens ruin to the party, and that it ſhall befal him by means of laſcivious women and bad company. Two croſſes on this line, one near the fore finger, and the other bending towards the little finger, ſhew the party to be weak, inclined to modeſty and virtue; and in women generally denotes modeſty.

The liver line, if it be ſtraight, and croſſed by other lines, denotes a ſound judgment, and a piercing underſtanding; but if it be winding, crooked and bending outwards, it ſhews deceit and flattery. If it makes a triangle or quadrangle, it ſhews one to be of a noble deſcent, ambitious of honour and promotion. If this line and the middle line begin near each other, it denotes a man to be weak in judgment, but if a woman, danger by hard labour.

The plane of Mars being the hollow of the hand, moſt of the lines paſſing through it, are very ſignificant. Being hollow, and the lines crooked and diſtorted, it threatens the party to fall by his enemies. When the lines beginning at the wriſt are long within the plane, reaching to the brawn of the hand, it ſhews the perſon to be of a hot and fiery ſpirit, given to quarreling. If deep large croſſes be in the middle plane, it ſhews the party ſhall obtain honour by martial exploits: but if a woman that ſhe ſhall have ſeveral huſbands, and eaſy labour with her children.

The line of death is fatal, and threatens with ſickneſs and ſhort life, when croſſes appear in it. A clouded moon therein threatens a childbed woman with death. A ſtar like a comet, threatens ruin by war, or death by peſtilence: But if a bright ſun appear therein, it promiſes long life and proſperity.

The lines of the wriſt being fair, denotes good fortune, but if broken and croſſed the contrary.

Thus he that Nature richly underſtands,
May from each line imprinted in his hands,
His future fate and fortune come to know,
And in what path it is his feet ſhall go:
His ſecret inclinations he may ſee,
And to what vice he ſhall addicted be:
To th' end that, when he looks into his hand,
He may upon his guard the better ſtand,
And turn his wand'ring ſteps another way,
Whene'er he finds he does from virtue ſtray.

CHAP. V.

Judgments drawn from the several parts of the Body.

A LARGE and full breaſt, ſhews a man valiant, but proud, ſoon angry, and hard to deal with. He whoſe breaſt is narrow riſing a little in the middle, is, by the beſt rules of phyſiognomy of a clear ſpirit, great underſtanding, very faithful, clean both in mind and body, yet ſoon angry, and inclined long to keep it. He whoſe breaſt is ſomewhat hairy, is very luxurious, and ſerviceable to another. He who hath no hairs upon his breaſt, is a man weak by nature, of a ſlender capacity, timorous, but of a laudable life and converſation, much retired and inclined to peace.

The back of the chine bone, if the fleſh is hairy and lean, and higher than any other part behind, ſignifies a man ſhameleſs, beaſtly, and malicious. He whoſe back is large and fat, is thereby denoted to be ſtrong and ſtout, but of a heavy diſpoſition, vain, ſlow and full of deceit.

He or ſhe whoſe belly is ſoft all over, is weak, luſtful, and fearful, of good underſtanding, an excellent invention, a little eater, of various fortune. He whoſe fleſh is rough and hard, is of a ſtrong conſtitution, very bold, but proud, vain, and of a cruel temper. He whoſe ſkin is ſmooth, fat and white, is curious, vain-glorious, timorous, malicious.

A thigh full of ſtrong briſly hair inclined to curl, ſignifies one luſtful, and fit for copulation; thighs with little hair, and that ſoft, ſhews the perſon to be chaſte, having no great deſire to venereal pleaſures, and will have but few children.

The legs of both men and women have a fleſhy ſubſtance behind, called calves; now a great calf, and large bone, and hairy, denotes the perſon to be ſtrong, bold, dull in underſtanding, ſlow in buſineſs, inclined to procreation, and for the moſt part fortunate. Little legs and little hair on them, ſhew the perſon to be weak, fearful, of a quick underſtanding, and neither luxurious at bed or board. He whoſe legs do much abound with hair, is luſtful, luxurious, ſtrong but fickle, and abounding with ill humours.

The feet of either men or women, if broad and thick with fleſh and long in figure, eſpecially if the ſkin feels hard, of a ſtrong conſtitution, but of weak intellects. But feet that are thin and lean, and ſoft, ſhew a weak body, but a ſtrong underſtanding, and excellent wit.

The ſoles of the feet do adminiſter as plain and evident ſigns, to know the diſpoſition and conſtitution by, as the palms of the hands, being as full of lines, by which all the fortunes or misfortunes of man or woman may be known, and their inclinations appear. But this in general we may take notice, that many long lines and ſtrokes do preſage many afflictions, and a very troubleſome life, attended with much grief, care and poverty: But ſhort lines, if they are thick and full of croſs lines, are yet worſe in every degree. Thoſe the ſkin of whoſe ſoles are very thick, are generally ſtrong and venturous; whereas, thoſe the ſkin of whoſe ſoles are thin, are generally weak and timorous.

I ſhall now, having given an account of what judgments may be formed from the ſeveral parts of the body, before I conclude, give an account of what may be drawn by the rules of Phyſiognomy, from things extraneous, which are found upon many, and which indeed to

them are parts of the body, but are so far from being necessary parts that they are the deformity and burden of it, and speak of the habits of the body as they are distinguished persons.

I. *Of crooked and deformed Persons.*

A CROOKED breast or shoulder, or the exuberance of flesh in the body either of man or woman, signifies the person to be extremely parsimonious and ingenious, and of great understanding, but very covetous, deceitful, malicious, and of a bad memory; either extremely virtuous or vicious, seldom in a medium. But if the person deformed hath an excrescence on his breast, instead of the back, he is for the most part of a double heart, and very mischievous.

II. *Of the divers Manners of going, and particular postures both of Men and Women.*

HE or she that goes slowly, making great steps as they go, are generally persons of bad memory, dull of apprehension, given to loitering, and slow of belief. He who goes apace, and makes short steps, is most successful in all his undertakings, swift in his imaginations, and humble in the disposition of his affairs. He who makes wide and uneven steps, and side-long is one of a greedy sordid nature, subtle, malicious, and wills to do evil.

III. *Of the Gait or Motion in Men or Women*

EVERY man and woman hath a certain gait or motion. For a man to be shaking his head, or using any light motion with his hands or feet, whether he stands or sits, or speaks, is superfluous, unnecessary, and unhandsome: and such, by the rules of physiognomy, are vain, unwise, unchaste, detractors, unstable and unfaithful. He or she who have little motion when discoursing with any one, is for the most part, wise, well-bred, frugal, faithful, industrious and fit for any employment. He whose posture is forwards and backwards, mimical, is thereby denoted to be a vain, silly person, dull of wit, and very malicious. He whose motion is lame and limping, or otherwise imperfect, or that counterfeits an imperfection, is denoted to be envious, malicious, false and detracting.

IV *Judgments drawn from the Stature of a Man.*

PHYSIOGNOMY draws also several judgments from the stature of a man; such as, If a man be straight and upright, inclined rather to leanness than fat, it shews him to be bold, cruel, proud clamorous, hard to please and harder to be reconciled when displeased, very frugal, deceitful and malicious. To be of a tall stature and corpulent with it, denotes him to be not only handsome, but valiant also; altho' of no extraordinary understanding, and, which is worst of all, ungrateful. He who is extremely tall, and very lean and thin, is a projecting man, that designs no good to himself, and suspects every one to be as bad as himself, importunate to obtain what he desires, and extremely wedded to his own humours. He who is thick and short, is vain, envious, suspicious, shallow of apprehension, easy of belief, and long before he forgets an injury. He who is lean and short, but upright, is, by the rules of physiognomy, wise and ingenious, bold and confident of a good understanding, but of a deceitful heart. He who stoops as he goes not by age but custom, is laborious, a retainer of se-

crets, but very incredulous. He that goes with his belly ſtretching forth, is ſociable, merry, and eaſy to be purſuaded.

V. *General Obſervations worthy of Note.*

WHEN you find a red man to be faithful, a tall man to be wiſe, a fat man to be ſwift on foot, a lean man to be a fool, a handſome man not proud, a poor man not envious, a whitely man not wiſe, one that talks through the noſe to ſpeak without ſnuffling, a knave no liar, an upright man not to walk ſtraight, one that drawls when he ſpeaks not crafty and circumventing; a man of a hot conſtitution not luſtful, one that wink, on another with his eyes not falſe and deceitful, one that knows how to ſhuffle his cards, ignorant how to deal them; a rich man prodigal, a ſailor and hangman pitiful, a poor man to build churches, a higler not to be a liar and a praiſer of his ware, a buyer not to find fault with and undervalue that which he would willingly buy, a quack-doctor to have a good conſcience, a bailiff or catchpole not to be a mercileſs vilian, an hoſtes not to over-reckon you, and an uſurer to be charitable; then ſay you have found a prodigy, or men acting contrary to the courſe of their nature.

The end of the Maſter-piece.

THE

Family Phyſician.

Being choice and approved Remedies for the ſeveral diſtempers incident to the human body.

A powder for the Epilepſy or falling ſickneſs.

TAKE of opponax, crude antimony, dragon's blood, caſtor, peony-ſeeds, of each an equal quantity, make them into a ſubtile powder, the doſe of half a dram, in black cherry water. Before you take it, the ſtomach muſt be cleanſed with ſome proper vomit, as that of Mynſicht's emetic Tartar, from four grains to ſix. For children, ſalt of vitriol, from a ſcruple to half a dram.

A Vomit for a ſwiming in the Head.

Take cream of tartar half a ſcruple, caſtor two grains, mix all together for a vomit, to be taken at four o'clock in the afternoon. At night, going to bed, it will be very proper to take a doſe of the apolectic powder.

For Spitting of Blood.

Take conſerve of comfrey, and of hips, of each an ounce and an half, conſerve of red roſes 3 ounces, dragon's blood a dram, ſpecies of hyacinth 2 ſcruples, red coral a dram; mix with the ſyrup of red poppies, and make a ſoft electuary; take the quantity of a walnut night and morning.

A powder againſt Vomiting.

Take crabs eyes, red coral, ivory, of each 2 drams; burnt hartſhorn 1 dram, cinnamon and red ſaunders of each half a dram: Make all for a ſubtile powder, and take half a dram.

For the Bloody Flux.

Take a dram of powder of rhubarb in a ſufficient quantity of conſerve of red roſes, early in the morning, and at night take of torrefied or roaſted rhubarb half a dram, diaſcordium a dram and an half, liquid laudanum cydoniated a ſcruple. Mix them and make a bolus.

For an Inflamation of the Lungs.

Take curious water 10 ounces, water of red poppies 3 ounces, ſyrup of poppies 1 ounce, pearl prepared a dram: Make a julep, and take ſix ſpoonful every four hours.

For Weakneſs in Women.

After a gentle purge or two, take the following decoction, viz. a quarter of a pound lignum vatæ, ſaſſafras 2 ounces; boil the whole in ſix quarts of water to a gallon: ſtrain and keep it for uſe: Take half a point firſt in the morning, faſting for two hours after; another at four of the clock in the afternoon: and a third at going to bed.

An Ointment for the Itch.

Take ſulphur vive, in powder, half an ounce; oil of tarter per deliquium a ſufficient quantity; ointment of roſes 4 oz. make a liniment, to which add a ſcruple of oil of rhodium to aromatiſe it, and rub the parts effected with it.

For Worms in Children.

Take wormſeed half a dram, flower of ſulphur a dram, ſal prunnella half a dram: Mix and make a powder; give as much as will lie upon a ſilver threepence night and morning, in treacle or honey. For grown perſons add a ſmall quantity of aloe roſatum, and ſo make them up into pills, 3 or 4 of which may be taken every morning.

A Diet Drink for the Vertigo, or ſwiming of the Head.

Take ſmall ale, and boil it in the leaves of miſletoe of the apple tree, roots of male peony and peony flowers; then put it into a veſſel of four gallons, in which hang a bag of half a pound of peacock's dung, and 2 drams of cloves bruiſed; drink it as a common drink.

For a Looſneſs.

Take of Venice treacle and diaſcordium, of each half a dram, in warm ale, water gruel, &c. at night going to bed.

For Fevers in Children.

Take of crabs' eyes 1 dram, cream of tartar half a dram, white ſugar candy finely powdered, the weight of both: Mix as well together, and give as much as will lie upon a ſilver 3d in a ſpoonful of barley-water or ſack whey.

For an Headach of a long ſtanding.

Take the juice of powder of diſtilled water of hog-lice, and continue the uſe of it. *For the Gripes in Children.*

Give a drop or two of the oil of anniſeed in a ſpoonful of penada, milk, or any thing you ſhall think proper.

For an Ague.

Take the common bitter drink, without the purgative 2 quarts, ſalt of wormwood 2 oz. ſaffron a dram. After a vomit or convenient purge, take half a point of this three times a day, in the morning faſting, mid-day, and at night.

For the Cholic.

Take anniſeed, ſweet fennel, coriander, caraway ſeeds, 2 drams each, cummin ſeed a dram, raſed ginger a ſmall quantity; bruiſe all in a mortar, and put them into a quart of Nantz brandy to infuſe 3

days, ſhaking the bottle 3 or 4 times a day, then ſtrain it; take 2 or 3 ſpoonfuls in the ſit.

For the Palpitation or Beating of the heart.

Take powder of crabs' eyes, burnt hartſhorn, red coral, of each a dram, Engliſh ſaffron a ſcruple; mix and make a powder. Take a ſcruple of it night and morning in a ſpoonful of barley water, drinking a draught after it.

For a pain in the ſtomach proceeding from Wind.

Take Venice treacle 4 drams, dittany, ſeeds of ambos ducas, each ſix grains, gallangal, cloves, coral, wood of aloes, each a ſcruple, conſerve of roſes 1 oz. concerve of mint half an onuce, with ſyrup of mint make an electary. Doſe; the quantity of a nutmeg in the morning faſting. *Lozenges reſtorative in a Conſumption*

Take pine nuts prepared 2 drams and an half, green fuſtic 2 drams, Species diambræ 2 ſcruples, cinnamon and cloves half a dram each, galangal a ſcruple, nutmeg two ſcruples, white ginger, half a dram. Xilo aloes half a ſcruple, with 4 ounces and a half of ſugar diſſolved in roſe water, and of the ſpices make a confection in lozenges.

Againſt Aches and Pains in the Joints.

Take powder of camopetys and gentian of each 5 drams, dried leaves of rue 3 ounces: make all into a fine powder, after due purging, give a dram of this, night and morning, in a ſpoonful of white wine.

For Spots and Pimples in the Skin.

Take black ſoap 2 ounces, ſulphur vive in powder 1 oz. tie them in a rag, and hang them in a point of vinegar for the ſpace of nine days: then rub and waſh the part gently twice a day, that is night and morning. *Purging Pills for the Scurvey.*

Take roſin of julep 20 grains, aromatic pills with gum 2 grains, vitriolated tar 26 grains, oil of juniper 10 grains, with a ſufficient quantity of gum armonic diſſolved in vinegar of ſquills. Take 4 at a time early in the morning faſting two hours after. You may take them once a week.

A diſtilled Water for a confirmed Phthiſic.

Take leaves of ground ivy 5 handfuls, 6 nutmegs ſliced, 2 lb. of the crumbs of wheat bread, 3 lb. of ſnails half boiled and ſliced into milk, and take of it 3 or 4 times a day, ſweetened with ſugar and pearl of roſes. *A quieting Night-draught when the Cough is violent.*

Take of water of green wheat 6 oz. ſyrup or diaſcordium 3 oz. Mix them, and take two or three ſpoonfuls at going to bed.

For Vomiting or Looſneſs.

Take of Venice treacle 1 ounce, powder of tormentile roots, contrayerva, pearl and prepared coral of each a ſufficient quantity, with the ſyrup of dried roſes make an electuary: Take the quantity of a walnut every 4th or 5th hour; drink after it a draught of ale or beer, with a cruſt of bread, mace, or cinnamon, boiled in it.

A diſtilled Water for the Jaundice.

Take 1 lb. of the roots of Engliſh rhubarb ſliced, the rhines of 4 oranges ſliced, filings of ſteel 1 lb. freſh ſtrawberries 6 lbs. 3 quarts of white wine; let them ſtand in infuſion for ſome time, and diſtill all according to art. Take 4 ounces twice a day, with 20 drops of the ſpirit of ſaffron. *For the Rhumatiſm.*

Take volatile ſalt of hartſhorn, volatile ſalt of amber, 2 drams each, crabs' eyes 1 oz. cochineal a ſcruple; mix and make a powder. Take

half a dram three times a day, or every four hours keeping your bed and sweating upon it. *For a violent Toothach.*

If the teeth be hollow, nothing cures but drawing, but if occasioned through a defluxion of humours, first take a gentle purge, and at night when you go to bed take a grain or two of London laudanum, which will thicken the humour, stop the defluxions, and consequently remove the pain. *For St. Anthony's Fire.*

Bleeding premised, take frog spawn water, plantain water, half a pint each, sugar of lead 2 drams; mix and shake the bottle till the salt is dissolved. Dip a linen cloth in this water, and bathe the part affected; it cools wonderfully.

For the Black Jaundice.

Take flowers of sal armoniac, dianucum, and extract of gentian, of each a dram; salt amber a scruple; gum aromatic dissolved in vinegar of squills what suffices; make a mass of small pills, take it 3 or 4 mornings and evenings.

For sinking Gums without Rottenness.

Take powder of best myrrh 1 oz. claret wine a pint; after two or three days infusion, wash your gums and mouth with it.

For the Rhumatism proceeding from the scurvy.

Take stone horse dung a pound, white wine 3 or 4 qts. distil according to art; take 5 or 6 ounces twice or thrice a day. Some take the infusion only, but this exceeds it.

For a convulsive Cough in Children.

After a gentle vomit and purge, apply a blister to the nape of the neck; but if the distemper be obstinate, cut an issue in the neck or arm: Keep them close to a diet drink of shavings of ivory, saunders, and some diuretic ingredients. But if a specific, you may have cupmoss in powder every day in boiled milk, and the decoction of hyssop, with a little castor and saffron.

For an inward Bleeding.

Take leaves of plantain and nettles, of each three handfuls, bruise them well, and pour on them 6 ounces of plaintain water: Make a strong emulsion, and drink the whole off.

For a Bleeding at the Nose.

Take a dried toad, sew it up in a silk bag, and hang it at the pit of the stomach a considerable time. This hath performed the cure when other medicines have failed.

For the same, Take caleanthum rubefactum, or the caput mortuum of vitrol half an ounce, boil it in a quart of quick lime water to a pint, when cold and settled, strain it. Dip a tent in it, and thrust it up the nostril, or you may snuff it up.

Powder against Poison and Pestilence.

Take zeodary, euphorbium, corallina, tormentil, gentian, common dittany, sealed earth, armenian hole, red and white coral, spikenard, mastich, clove jelly-flowers, lesser centuary, red saunders, bone of a stag's heart, camphire, of each equal parts. Make all into an impalpable powder; give one dram with sorrel water, or with wine and sorrel boiled together.

THIS BY WILLIAM SALMON. 16th CENT

LONDON QUACK. LIVED SOME TIME IN NEW ENGLAND

The Experienced Midwife.

1st Printed 1700

PART I.

A GUIDE FOR CHILD-BEARING WOMEN.

INTRODUCTION.

I HAVE given this book the title of The COMPLETE and EXPERIENCED MIDWIFE, both becauſe it is chiefly deſigned for thoſe that profeſs midwifery, and contains whatever is neceſſary for them to know in the practice thereof, and alſo becauſe it is the reſult of many years experience, and that in the moſt difficult caſes, and is therefore the more to be depended upon. A midwife is the moſt neceſſary and honourable office, being indeed a helper of nature: which therefore makes it neceſſary for her to be well acquainted with all the operations of nature in the work of generation, and inſtruments with which ſhe works: For ſhe that knows not the operations of nature, nor with what tools ſhe works, ſhe muſt needs be at a loſs how to aſſiſt therein. And ſeeing the inſtruments of operation both in men and women are thoſe things by which mankind is produced, it is very neceſſary that all midwives ſhould be well acquainted with them, that they may the better underſtand their buſineſs, and aſſiſt nature as there ſhall be occaſion. The firſt thing then neceſſary, as introductory to this treatiſe, is an ANATOMICAL DESCRIPTION of the ſeveral parts of generation both in men and women: and having deſigned throughout to comprehend much in a little room, I ſhall avoid all unneceſſary and impertinent matters with which books of this nature are for the moſt part too much clogged, and which are more curious than needful. And though I ſhould be neceſſitated to ſpeak plainly, that ſo I may be underſtood, yet I ſhall do it with that modeſty that none ſhall have need to bluſh, unleſs it be from ſomething in themſelves, rather than from what they ſhall find here, having the motto of the royal garter for my defence, which is, "*Homi ſoit qui mal'y penſe;*" or, Evil to him that evil thinks.

CHAP. I.

An Anatomical Deſcription of the inſtruments of Generation in Man and Woman.

SECTION I. *Of the parts of Generation in Man.*

AS the generation of mankind is produced by the coition of both ſexes, it neceſſarily follows that the inſtruments of generation are of two ſorts, to wit, male and female; the operation of which are by action and paſſion, and herein the agent is the ſeed, and the patient blood; whence we may eaſily collect, that the body of man being generated by action and paſſion, he muſt needs be ſubject thereunto during his life. Now, ſince the inſtruments of generation are male and female, it will be neceſſary to treat of them both diſtinctly, that the diſcreet midwife may be well acquainted with their ſeveral parts, and their various operations, as they contribute to the work of generation. And, in doing this, I ſhall give the honour of precedence to my own ſex, and ſpeak firſt of the parts of generation in

man, which shall be comprehended under six particulars, viz. The preparing vessels, the corpus varicosum, the testicles or stones, the vasa deferentia, the seminal vessels, and the yard, of each which in their order.

1. The first are the vasa preparentia, or preparing vessels, which are in number four, two veins, and as many arteries; and they are called preparing vessels from their office, which is to prepare that matter or substance which the stones turn into seed to fit it for the work. Whence you may note, that the liver is the original of blood, and distributes it through the body by the veins, and not the heart, as some have taught. As to the original of these veins, the right vein proceedeth from the vena cava, or great vein, which receives the blood from the liver, and distributes it by its branches to all the body; the left is from the emulgent vein, which is one of the two main branches of the hollow vein passing to the reins. As to the arteries, they both arise from the great artery, which the Greeks call that which is indeed the great trunk and original of all the arteries. But I will not trouble you with Greek derivations of words affecting more to teach you the knowledge of things than words.

2. The next thing to be spoken of is the corpus varioſum, and this is an interweaving of the veins and arteries which carry the vital and natural blood to the stones to make seed of. These, though at their first descension they keep at a small distance the one from the other, yet before they enter the stones they make an admirable intermixture of twisting the one from the other, so that sometimes the veins go into the arteries, and sometimes the arteries into the veins; the substance of which is very hard and long, not much unlike a pyramid in form, without any sensible hollowness: The use is to make one body of the blood and vital spirits, which they both mix and change the colour of, from red to white, so that the stones may both have a fit matter to work upon, and do their work more easily; for which reason the interweaving reacheth down to the very stones, and pierceth in their substance.

3. The stones are the third thing to be spoken of, called also testicles: in Latin, *Testes*, that is, witnesses, because they witness one to be a man. As to these I need not tell you their number, nor where nature has placed them, so that is obvious to the eye. Their substance is soft, white and spungy, full of small veins and arteries, which is the reason they swell to such a bigness upon the flowing down of the humour in them. Their form is oval; but most authors are of opinion that their bigness is not equal, but that the right is the biggest, the hottest, and breeds the best and strongest seed. Each of these stones hath a muscle, called, *cremaſter*, which signifies to hold up, because they pull up the stones in the act of coition, that so the vessels being slackened, may the better void the seed. These muscles are weakened both by age and sickness; and the stones then hang down lower than in youth and health. These stones are of great use, for they convert the blood and vital spirits into seed for the procreation of man: But this must not be understood as if they converted all the blood that comes into them into seed, for they keep some for their own nourishment. But besides this, they add strength and courage to the body; which is evident from this, that eunuchs are neither so hot, strong, nor valiant, as other men, nor is an ox so hot or valiant as a bull.

4. The next in order are the *vasa deferentia*, which are the veſſels that carry the ſeed from the ſtones to the ſeminal veſſels, which is kept there till its expulſion. Theſe are in number two, in colour white, and in ſubſtance nervous or ſinewy; and from a certain hollowneſs which they have in them are alſo called ſpermatic pores, they riſe not far from the preparing veſſels; and when they come into the cavity of the belly, they turn back again and paſs into the backſide of the bladder, between it and the right gut; and when they come near the neck of the bladder they are joined to the ſeminal galls, which ſomewhat reſemble the cells of an honeycomb; which cells contain an oily ſubſtance, for they draw the fatty ſubſtance from the ſeed which they empty into the urial paſſage, which is done for the moſt part in the act of copulation, that ſo the thin internal ſkin of the yard ſuffers not through the acrimony or ſharpneſs of the ſeed. And when the *vaſa deferentia* has paſſed as before declared, they fall into the *glandula poſtrata*, which are the veſſels ordained to keep the ſeed, and which are the next to be ſpoken of.

5. The ſeminal veſſels, called *glandulum ſeminale*, are certain kernels placed between the neck of the bladder, and the right gut, compaſſing about the *vaſa deferentia*, the urethra, or common paſſage for ſeed and urine, paſſing through the midſt of it, and may properly enough be called the conduit of the yard. At the mouth of the urethra, where it meets with the *vaſa deferentia*, there is a thick ſkin, whoſe office is to hinder the ſeminal veſſels, which are of a ſpongy nature, from ſhedding their ſeed againſt their will; the ſkin is very full of pores, and through the heat of the act of copulation the pores open, and ſo give paſſage to the ſeed, which being of a very ſubtle ſpirit, and eſpecially being moved will paſs through the caruncle or ſkin as quickſilver through leather; and yet the pores of this ſkin are not diſcernable unleſs in the anatomy of a man, who had ſome violent running in the reins when he died, and then they are conſpicuous, thoſe veſſels being the proper ſeat of that diſeaſe.

6. The laſt of the parts of generation in man to be ſpoken of, is the yard, which has a principal ſhare in the work of generation; and is called *Penis*, from its hanging without the belly; and it conſiſts of ſkin, tendons, veins, arteries, ſinews and great ligaments, and is long and round, being ordained by nature both for the paſſage for the urine, and for the conveyance of ſeed into the matrix. It hath ſome parts common with it to the reſt of the body, as the ſkin, or the *Membrana Carnoſa* and ſome parts it has peculiar to itſelf, as the two nervous bodies, the Septum, the Urethra, the Glans, the four muſcles, and the veſſels. The ſkin which the Latins called *Cutis*, is full of pores, through which the ſweat and fuliginous or ſooty black vapours of the third concoction (which concocts the blood into fleſh) paſs out; theſe pores are very many and thick but hardly viſible to the eye; and when the yard ſtands out, it is flaggy; but when it ſtands, it is ſtiff; The ſkin is very ſenſible, becauſe the nerves concur to make up its being; for the brain gives ſenſe to the body by the nerves. As to the *Carnus Membrana*, or fleſhy ſkin, it is ſo called, not becauſe its body is fleſhy ſkin, but becauſe it lies between the fleſh, and paſſeth into other parts of the body underneath the fat, and ſticks cloſe to the muſcles; but in the yard there is no fat at all, only a few ſuperficial veins and arteries paſs between the former ſkin and this, which when

the yard ſtands are viſible to the eye: Theſe are the parts common both to the yard and the reſt of the body. I will now ſpeak of thoſe parts of the yard which are peculiar to itſelf, and to no other parts of the body: and thoſe are likewiſe ſix, as has been already ſaid of which it will alſo be neceſſary to ſpeak particularly. And

1. Of the Nervous Bodies: Theſe are two, though joined together, and are hard, long and ſinewy, they are ſpongy within and full of black blood; the ſpongy ſubſtance of the inward part of it ſeems to be woven together like a net, conſiſting of innumerable twigs of veins and arteries. The black blood contained therein is very full of ſpirits, and the delights or deſire of Venus add heat to theſe, which cauſeth the yard to ſtand; and that is the reaſon that both venereal ſights and tales will do it. Nor need it be ſtrange to any, that Venus, being a planet cold and moiſt, ſhould add heat to thoſe parts, ſince by night, as the Pſalmiſt teſtifies, Pſal. cxxi. 6. Now this hollow, ſpungy intermixture or weaving was ſo ordered by nature, on purpoſe to contain the ſpirit of venereal heat, that the yard may not fall before it has done its work. Theſe two ſide ligaments of the yard, where they are thick and round, ariſe from the lower part of the ſhare-bone, and at the beginning are ſeparated the one from the other, reſembling a pair of horns, or the letter Y. where the Urethra, or common paſſage of urine and ſeed, paſſeth between them.

2. Thoſe nervous bodies of which I have ſpoken, ſo ſoon as they come to the joining of the ſhare-bone, are joined by the *Sceptum Lucium*, which is the ſecond internal part to be deſcribed, which in ſubſtance is white and nervous, or ſinewy, and its uſe is to uphold the two ſide ligaments and the Urethra.

3. The third thing in the internal part of the yard is the Urethra, which is the paſſage or channel by which both the ſeed and urine is conveyed out through the yard. The ſubſtance of it is ſinewy, thick, ſoft and looſe, as the ſide-ligaments are; it begins at the neck of the bladder, and, being joined to it, paſſeth to the glans. It has in the beginning of it three holes, of which the largeſt of them is in the midſt, which receives the urine into it, the other two are ſmaller, by which it receives the ſeed from each ſeminal veſſel.

4. The yard has four muſcles; on each ſide two; Theſe muſcles are inſtruments of voluntary motion, without which no part of the body can move itſelf. It conſiſts of fibrous fleſh to make its body, of nerves for its ſenſe, of veins for its nouriſhment, of arteries for its vital heat, of a membrane or ſkin to knit it together, and to diſtinguiſh one muſcle from another, and all of them from the fleſh; Of theſe muſcles, as I ſaid before, the yard has two of each ſide, and the uſe of them is to erect the yard, and make it ſtand, and therefore they are alſo called Erectors: But here you muſt note, that of two on each ſide the one is ſhorter and thicker than the other; and theſe are they that do erect the yard, and ſo are called Erectors: But the two other being longer and ſmaller, their office is to dilate the lower part of the Urethra, both for making water, and emitting the ſeed; upon which account they are called Accelerators.

5. That which is called the Glans, is the extreme part of the yard, which is very ſoft, and of a moſt exquiſite feeling by reaſon of the thinneſs of the ſkin wherewith it is covered: this is covered with the *Præputium*, or fore ſkin, which in ſome men covers the top of the yard

quite close, but in others it doth not ; which skin moving up and down in the act of copulation, brings pleasure both in man and woman : this outer skin is that which the Jews were commanded to cut off on the eighth day : this *Præputium*, or fore-skin, is tied to the glans by a ligament or bridle, which is called *Frænum*.

6. The last internal part of the yard are the vessels thereof, veins, nerves and arteries. Of these some pass by the skin, and are visible to the eye when the yard stands ; others pass by the inward part of the yard ; the arteries are wonderfully dispersed thro' the body of the yard, much exceeding the dispersion of the veins ; for the right artery is dispersed to the left side, and the left to the right side. It hath two nerves, the lesser whereof is bestowed upon the skin, the greater upon the muscles and the body of the yard. But thus much shall suffice to be said in describing the parts of generation in men : and shall therefore in the next place, proceed to describe those of women, that so the industrious midwife may know how to help them in their extremities.

Sec. II. *Describing the Parts of Generation in Women.*

WHATEVER ignorant persons may imagine, or some good women think they are unwilling those private parts which nature has given them, should be exposed, yet it is in this case absolutely necessary ; for I do positively affirm, that it is impossible truly to apprehend what a midwife ought to do, if these parts are not perfectly understood by them, nor do I know any reason they have to be ashamed to see or hear a particular description of what God and nature hath given them, since it is not the having these parts, but the unlawful use of them that causes shame.

To proceed then, in this description more regularly, I shall speak in order of these following principal parts ; 1st. Of the Privy Passage : 2dly. Of the Womb : 3dly. Of the Testicles, or stones : 4thly. Of the Spermatic Vessels.

1st. Of the Privy Passage. Under this head I shall consider the six following parts.

1. The lips which are visible to the eye, and are designed by nature as a cover to the *Fissura Magna*, or great orifice ; These are framed of the body, and have pretty store of spungy fat : and their use is to keep the internal parts from cold and dust. These are the only things that are obvious to the sight ; the rest are concealed, and cannot be seen, unless the two lips are stretched asunder, and the entry of the privities opened.

2. When the lips are severed, the next thing that appears is the Nymphæ or wings ; they are formed of soft and spungy flesh, and are in form and colour like the comb of a cock.

3. In the uppermost part, just above the urinary passage, may be observed the Clitoris, which is a sinewy and hard body full of spungy and black matter within, like the side ligament of the yard : representing in form the yard of a man, and suffers erection and falling as that doth : and it grows hard, and becomes erected as a man's yard, in proportion to the desire a woman hath in copulation ; and this also is that which gives a woman delight in copulation ; for without this a woman hath neither a desire to copulation, and delight in it, nor can conceive by it. And I have heard that some women have had their Clitoris so long that they have abused other women therewith ; Nay,

ſome have gone ſo far as to ſay, that thoſe perſons that have been reported to be Hermaphrodites, as having the genitals both of men and women, are only ſuch women in whom the Clitoris hangs out externally, reſembling the form of a yard. But though I will not be poſitive in that, yet it is certain, that the larger the Clitoris is in any woman the more luſtful ſhe is.

4. Under the Clitoris, and above the neck, appears the Orifice, or urinary paſſage, which is much larger in women than men, and cauſes their water to come from them in a great ſtream. On both ſides the urinary paſſage may be ſeen two ſmall membraneous appendices, a little broader above than below, iſſuing forth of the inward parts of the great lips, immediately under the Clitoris; the uſe whereof is to cover the orifice of the urine, and defend the bladder from the cold air: So that when a woman piſſeth, ſhe contracts herſelf, ſo that ſhe conducts out the urine without ſuffering it to ſpread along the privities, and often without ſo much as wetting the lips; and therefore theſe ſmall membraneous wins are called the *Nymphæ*, becauſe they govern the woman's water. Some women have them ſo great and long, that they have been neceſſitated to cut off ſo much as has exceeded and grew without the lips.

5. Near this are four Caruncles, or fleſhy knobs, commonly called Caruncles Myrtiformes; theſe are placed, on each ſide two, and a ſmall one above, juſt under the urinary paſſage, and in virgins are reddiſh, plump and round, but hang flagging when virginity is loſt: In virgins they are joined together by a thin and ſinewy ſkin or membrane, which is called the Hymen, and keeps them in ſubjection, and makes them reſemble a kind of roſe bud half blown. This diſpoſition of the Caruncles is the only certain mark of virginity, it being in vain to ſearch for it elſewhere, or hope to be informed of it any other way: And 'tis from the preſſing and bruiſing theſe Caruncles, and forcing and breaking the little membranes (which is done by the yard in the firſt act of copulation) that there happens an effuſion of blood; after which they remain ſeparted, and never recover their firſt figure, but become more and more flat as the acts of copulation are increaſed; and in thoſe that have children they are almoſt totally defaced, by reaſon of the great diſtinction theſe parts ſuffer in the time of their labour. Their uſe is to ſtraighten the neck of the womb, to hinder the cold air from incommoding it, and likewiſe to increaſe mutual pleaſure in the act of coition: for the Caruncles being then extremely ſwelled, and filled with blood and ſpirits, they cloſe with more pleaſure upon the yard of the man, whereby the woman is much more delighted. What I have ſaid of the effuſion of blood which happens in the firſt act of copulation, tho' when it happens it is an undoubted ſign of virginity, ſhewing the Caruncles Myrtiformes have never been preſſed till then: yet when there happens no blood, it is not always a ſign that virginity is loſt before; for the Hymen may be broken without copulation by the defluxion of ſharp humours, which ſometimes happen to young virgins, becauſe in them it is thinneſt: It is alſo done by the unſkilful applying of beſtaries to provoke the terms, &c. But theſe things happen ſo rarely, that thoſe virgins do thereby bring themſelves under a juſt ſuſpicion.

6. There is next to be ſpoken of, the neck of the womb, which is nothing elſe but the diſtance between the privy paſſage and the mouth,

of the womb, into which the man's yard enters in the act of copulation; and in women of reasonable stature is about eight inches in length. 'Tis of a membraneous substance, fleshy without skinny, and very much wrinkled within; and that it may both retain the seed cast into it in the act of copulation, and also that it may dilate and extend itself to give sufficient passage to the infant at its birth. It is composed of two membranes, the innermost of them being white, nervous and circularly wrinkled much like the palate of an ox, that so it might either contract or diliate itself according to the bigness or length of the man's yard: and to the end, that by the collision, squeezing, or pressing made by the yard in copulation, the pleasure may be mutually augmented. The external or outmost membrane is red and fleshy like the muscle of the Fundament, surrounding the first, to the end the yard may be the better closed within it; and it is by means of this membrane that the neck adheres the stronger to both the bladder and the right guts. The internal membrane in young girls is very soft and delicate, but in women much addicted to copulation it grows harder; and in those that are grown aged, if they have been given much to venery, it is almost become grisly.

2d. Having spoken of the privy passage, I come now to speak of the womb or matrix, its parts are two; the mouth of the womb, and the bottom of it. The mouth is an orifice at the entrance into in which may be dilated and shut together like a purse; for though in the act of copulation it be big enough to receive the glans of the yard, yet after conception it is so close shut, that it will not admit the point of a bodkin to enter; and yet again at the time of the woman's delivery, it is opened so extraordinary, that the infant passeth thro' it into the world; at which time this orifice wholly disappears, and the womb seems to have but one great cavity from its bottom to the very entrance of the neck. When a woman is not with child it is a little oblong and of a substance very thick and close; but when she is with child, it is shortened, and its thickness diminisheth proportionably to its distention: And therefore it is a mistake of some anatomists to affirm, that its substance waxeth thicker a little before a woman's labour; for any one's reason will inform them, that the more distended it is, the thinner it must be, and the nearer a woman is to the time of her delivery, the shorter her womb must be extended. As to the action by which this inward orifice of the womb is opened and shut, it is purely natural; for where it is otherwise, there would not be so many bastards gotten as there are; nor would some married women have so many children were it at their own choice, but they would hinder conception, though they would be willing enough to use copulation; for nature has attended that action with something so pleasing and delightful, that they are willing to indulge themselves in the use thereof, notwithstanding the pains that they afterwards endure, and the hazard of their lives, which often follow it: And this comes to pass not so much from any inordinate lust in women, as for that the great Director of nature, for the increase and multiplication of mankind, and even for all other species in the elementary world, hath placed such a magnetic virtue in the womb, that it draws the seed to it as the loadstone draws iron.

The Author of nature has placed the womb in the belly, that the heat might always be maintained by the warmth of the parts sur-

rounding it; it is therefore seated in the middle of the *Hypogastrum* (or the lower part of the belly) between the bladder and the rectum (or right gut) by which also it is defended from any hurt through the hardness of the bones; and it is placed in the lower part of the belly for the conveniency of copulation, and of a birth's being thrust out at the full time.

It is of figure almost round, inclining somewhat to an oblong, in part resembling a pear, for, from being broad at the bottom, it gradually terminates in the point of the orifice which is narrow.

The length, breadth and thickness of the womb differ according to the age and disposition of the body; for, in virgins not ripe it is very small in all its dimensions, but in women whose terms flow in great quantities, and such as frequently use copulation, it is much larger; and if they have had children, it is larger in them than in such as have none; but in women of a good stature, and well shaped (it is as I have said before) from the entry of the privy parts to the bottom of the womb, usually about eight, but the length of the body of the womb alone does not exceed three inches, and breadth thereof is nearly about the same, and of a thickness of the little finger, when the woman is not pregnant; but when the woman is with child, it becomes of a prodigious greatness, and the nearer she is to her delivery the more is the womb extended.

It is not without reason then that nature (or the God of nature rather) has made the womb of a membraneous substance; for thereby it does the easier open to conceive, and is gradually dilated from the growth of the *Fœtus* or young one, and is afterwards contracted and closed again, to thrust forth both it and the after-burden, and then to retire to its primitive seat. Hence also it is enabled to expel any noxious humours which may sometimes happen to be contained within it.

Before I have done with the womb, which is the field of generation, and ought therefore to be the more particularly taken care of (for as the seed of plants can produce no fruits, nor spring unless sown in ground proper to waken and excite their vegetative virtue, so likewise the seed of a man, though potentially containing all the parts of a child, would never produce so an admirable an effect, if it were not cast into the fruitful field of nature, the womb) I shall proceed to a more particular description of the parts thereof, and the uses to which nature has designed them.

The womb then is composed of various similary parts, that is, of membranes, veins, arteries and nerves. Its membranes are two, and they compose the principal part of its body: the outmost of which ariseth from the *Peritonium*, or cawl, and is very thin, without smooth, but within equal, that it may the better cleave to the womb, as it were fleshy and thicker than any else we meet within the body when a woman is not pregnant, and is interwoven with all sorts of fibres or small strings, that it may the better suffer the extension of the child, and the waters caused during the pregnancy, and also that it may the easier close again after delivery.

The veins and arteries proceed both from the Hypogastricks and the Spermatic Vessels, of which I shall speak by and by; all these are inserted and terminated in the proper membrane of the womb. The arteries supply it with blood for its nourishment, which, being brought thither in too great a quantity, sweats thro' the substance of it, and

diſtils as it were due into the bottom of its cavity; from whence do proceed both the terms in ripe virgins, and the blood which nouriſheth the embryo in breeding women. The branches which iſſue from the Spermatic Veſſels are in each ſide of the bottom of the womb, and are much leſs than thoſe which proceed from the Hypogaſtricks, thoſe being greater, and bedewing the whole ſubſtance of it. There are yet ſome other ſmall veſſels, which, ariſing the one from the other, are conducted to the internal orifice, and by theſe, thoſe that are pregnant do purge away the ſuperfluity of their terms when they happen to have more than is uſed in the nouriſhment of the infant; by which means nature has taken ſuch care of the womb, that, during its pregnancy, it ſhall not be obliged to open itſelf for the paſſing away thoſe excrementitious humours, which, ſhould it be forced to do, might often endanger abortion.

As touching the nerves, they proceed from the brain, which furniſhes all the inner parts of the lower belly with them, which is the true reaſon it hath ſo great a ſympathy with the ſtomach, which is likewiſe very conſiderably furniſhed from the ſame part: ſo that the womb cannot be afflicted with any pain, but the ſtomach is immediately ſenſible thereof, which is the cauſe of thoſe loathings or frequent vomitings which happen to it.

But, beſides all theſe parts which compoſe the womb, it hath four ligaments, whoſe office is to keep it firm in its place, and prevent its conſtant agitation, by the continual motion of the inteſtines which furround it, two of which are above and two below: Thoſe above are called the broad ligaments, becauſe of their broad and membraneous figure, and are nothing elſe but the production of the *Peritonæum*, which growing out of the ſide of the loins towards the reins come to be inſerted in the ſides of the bottom of the womb, to hinder the body from bearing too much on the neck, and ſo from ſuffering a precipitation, as will ſometimes happen when the ligaments are too much relaxed; and do alſo contain the teſticles, and as well conduct the different veſſels as the ejacalatories to the womb. The lowermoſt are called round ligaments, taking their original from the ſide of the womb near the horn, from whence they paſs the groin, together with the production of the *Peritonæum* which accompanies them through the rings and holes of the oblique and traverſe muſcles of the belly, where they divide themſelves into many little branches reſembling the foot of a gooſe, of which ſome are inſerted into the *os pubis*, and the reſt are loſt and confounded with the membranes that cover the upper and interior parts of the thigh; and it is that which cauſes that numbneſs which women with child feel in their thighs. Theſe two ligaments are long, round and nervous, and pretty big in their beginning near the matrix, hollow in their riſe, and all along to the *os pubis*, where they are a little ſmaller, and become flat, the better to be inſerted in the manner aforeſaid: it is by their means the womb is hindered from riſing too high. Now, although the womb is held in its natural ſituation by means of theſe four ligaments, yet it has liberty enough to extend itſelf when pregnant, becauſe they are very looſe, and ſo eaſily yield to its diſtention. But beſides theſe ligaments, which keep the womb as it were in a poiſe, yet it is faſtened, for greater ſecurity, by its neck, both to the bladder and rectum, between which it is ſituated. Whence it comes to paſs, that if at any time the womb be

inflamed it communicates the inflamation to the neighbouring parts.

Its uſe, or proper action in the work of generation, is to receive and retain the ſeed, and to reduce it from powder to action by its heat, for the generation of the infant, and is therefore abſolutely neceſſary for the conſervation of the ſpecies. It alſo ſeems by accident to receive and expel the impurities of the whole body, as when women have abundances of whites and to purge away from time to time the ſuperfluity of the blood, as it doth every month by the evacuation of blood, as when a woman is not with child. And thus much ſhall ſuffice for the deſcription of the womb, in which I have been the larger, becauſe as I have ſaid before, it is the field of generation.

3d. The next thing to be deſcribed in the genitals of women is the teſticles or ſtones, for ſuch women have as well as men, but are not for the ſame uſe, and indeed are different from thoſe in men in ſeveral particulars; as 1ſt, in place being within the belly, whereas in men they are without. 2dly, In figure, being uneven in women, but ſmooth in men. 3dly, In magnitude, being leſſer in women than in men. 4thly, They are not fixed in women by muſcles, but by ligatures. 5thly, They have no proſtrates or kernels as men have. 6thly, They differ in form, being depreſſed or flattiſh in women, but oval in men. 7thly, They have but one ſkin, whereas men have four; for the ſtones of men being more expoſed, nature has provided for them accordingly. 8thly, Their ſubſtance is more ſoft than in men. And, 9thly, Their temperature is colder than men. And as they differ in all theſe reſpects, ſo do they alſo in their uſe, for they perform not the ſame actions as men's, as I ſhall ſhew preſently. As for their ſeat, it is in the hollowneſs of the Abdomen, and therefore not extremely pendulous, but reſt upon the ova or egg. 'Tis true Galen and Hippocrates did erroneouſly imagine that the ſtones in women did both contain and elaborate the ſeed as theſe do in men, but it is a great miſtake: For the teſticles of a woman are as it were no more than two cluſters of eggs, which lie there to be impregnated by the moſt ſpirituous particles, or animating effluvia conveyed out of the womb through the two tubes, or different veſſels: But however, the ſtones in women are very uſeful; for where they are defective, generation work is at an end. For though theſe little bladders, which are on their ſuperfices, contain nothing of ſeed, yet they contain ſeveral eggs (commonly to the number of twenty in each teſticle) one of which being impregnated in the act of coition, by the moſt ſpirituous part of the ſeed of the man, deſcends through the oviducts into the womb, and there in proceſs of time, becomes a living child.

4th. I am now to ſpeak of the ſpermatic veſſels in women, which are two, and are faſtened in their whole extent by a membraneous appendix to the broad ligament of the womb: Theſe do not proceed from the teſticles as in men, but are diſtant from them a finger's breadth at leaſt; and being diſpoſed after the manner of the miſeraic veins, are trained along the membraneous diſtance between the different veſſels and the teſticles. Their ſubſtance is, as it were nervous and moderately hard; they are round, hollow, big, and broad enough at their end, joining to the horn of the womb. Some authors affirm, that by theſe, women diſcharge their ſeed into the bottom of the womb; but the whole current of our modern authors run quite another way, and are poſitive that there is no ſeed at all in their veſſels;

but that after the egg or eggs in the ovarie or teſticles are impregnated by the ſeed of the man, they deſcend through theſe two veſſels into the womb, where being placed, the embryo is nouriſhed. Theſe veſſels are ſhorter in women than they are in men: for the ſtones of a woman lying within the belly, their paſſage muſt needs be ſhorter; but their various wreathings and windings in and out, make amends for the ſhortneſs of their paſſage. Theſe veſſels are not united before they come to the ſtones, but divide themſelves into two branches, the largeſt whereof only paſſes through the teſticles, the leſſer to the womb, both for the nouriſhment of itſelf and the infant in it. I further obſerve, That theſe ſpermatic veins receives the arteries as they paſs by the womb, and ſo there is a mixture between natural and vital blood, that ſo the work might be the better wrought, and that it is ſo, appears by this, That if you blow up the ſpermatic vein, you may perceive the right and left veſſel of the womb blown up; from whence alſo the communication of all the veſſels of the womb may be eaſily perceived.

The deferentia or carrying veſſels ſpring from the lower part of the teſticles, and are in colour white, and in ſubſtance ſinewy, and paſs not the womb ſtraight, but wreathed with ſeveral turnings and windings, as was ſaid of the ſpermatic veſſels, that ſo the ſhortneſs of the way may be likewiſe recompenſed by their winding meanders; yet near the womb they become broad again. They proceed in two parts from the womb, which reſemble horns, and are therefore called the horns of the womb. And this is all that is needful to be known or treated of concerning the parts of generation both in men and women.

Only ſince our modern anatomiſts and phyſicians are of different ſentiments from the ancients, touching the woman's contributing of ſeed for the formation of the child as well as the man; the ancients ſtrongly affirming it, but our modern authors being generally of another judgment; I will here declare the ſeveral reaſons for their different opinions, and ſo paſs on.

SECTION III. *Of the differences between the modern Phyſicians, touching the Woman's contributing Seed to the formation of the Child.*

I WILL not make myſelf a party in this controverſy, but ſet down impartially, yet briefly, the arguments on each ſide, leaving the judicious reader to judge for himſelf.

Though it is apparent, ſay the ancients, that the ſeed of man is the principal efficient and beginning of action, motion and generation, yet it is evident that the woman doth afford ſeed, becauſe ſhe hath ſeminal veſſels, which elſe had been given her in vain; but ſince nature forms nothing in vain, it muſt be granted they were made for the uſe of ſeed and procreation, and fixed in their proper places to contribute virtue and efficacy to the ſeed: And this, ſay they, is further proved from hence. That if women at years of maturity uſe not copulation to object their ſeed, they often fall into ſtrange diſeaſes, and it is apparent, that women are never better pleaſed than when they are often ſatisfied this way, which argues the pleaſure and delight they take therein; which pleaſure, ſay they, is double in women to what it is in men: for, as the delight of men in copulation conſiſt chiefly in the emiſſion of the ſeed, ſo women are delighted both in the emiſſion of their own, and the reception of the man's.

But againſt all this, our modern authors affirm, That the ancients were very erroneous: foraſmuch as the teſticles in women do not afford ſeed, but are two eggs, like thoſe of fowls and other creatures, neither have they any ſuch offices as men, but indeed are an Ovarium, or receptacle for eggs, wherein theſe eggs are nouriſhed by the ſanguinary veſſels diſperſed through them; and from thence, one or more as they are fœcundated by the man's ſeed, are conveyed into the womb by the oviducts. And the truth of this, ſay they, is plain, that if you boil them, their liquor will have the ſame taſte, colour and conſiſtency, with the taſte of birds' eggs. And if it be objected, that they have no ſhells, the anſwer is eaſy; for the eggs of fowls, while they are in the ovary, nay, after they are fallen into the uterus, have no ſhell; and though they have one when they are laid, yet it is no more than a fence which nature has provided for them againſt outward injuries, they being hatched without the body; but thoſe of women being hatched within the body, have no need of any other fence than the womb to ſecure them.

They alſo further ſay, there are in the generation of the fœtus, or young ones, two principles, active and paſſive: the active is the man's ſeed, elaborated in the teſticles, out of the arterial blood and animal ſpirits; the paſſive principle is the ovum or egg impregnated by the man's ſeed; for to ſay that women have true ſeed (ſay they) is erroneous. But the manner of conception is this: The moſt ſpiritous part of man's ſeed, in the act of copulation, reaching up to the ovarium or teſticles of the woman (which contains divers eggs, ſometimes more, ſometimes fewer) impregnates of them, which being conveyed by the oviducts to the bottom of the womb, preſently begins to ſwell bigger and bigger, and drinks in the moiſture that is ſent thither, after the ſame manner that the ſeeds in the ground ſuck the fertile moiſture thereof to make them ſprout.

But, notwithſtanding what is here urged by our modern anatomiſts, there are ſome late writers of the opinion of the ancients, viz. that women have both, and emit ſeed in the act of copulation; and the good women themſelves take it ill to be thought merely paſſive in thoſe wars wherein they make ſuch vigorous encounters, and poſitively affirm they are ſenſible of the emiſſion of their ſeed in thoſe engagements, and that a great part of the delight they take in that act conſiſts in it. I will not therefore go about to take any of their happineſs away from them, but leave them in poſſeſſion of their imagined felicity.

Having thus laid the foundation of this work, in the deſcription I have given for the parts dedicated to the work of generation both in man and woman, I will now proceed to ſpeak of conception, and of thoſe things that are neceſſary to be obſerved by women from the time of their conception to the time of their delivery.

CHAP. III.

Of Conception; what it is; the Signs thereof whether conceived of a Male or Female; how women are to order themſelves after Conception.

SECTION I. *What Conception is, and the Qualifications requiſite thereto.*

CONCEPTION is nothing elſe but an action of the womb, by which the prolific ſeed is received and retained, that an infant may be engendered and formed out of it. There are two ſorts of conception; the one according to nature, which is followed by the gener-

ation of the infant in the womb; the other is falſe, and wholly againſt nature, in which the ſeed changes into water, and produces only falſe conception, moles or other ſtrange matter. Now there are three things principally neceſſary in order to a true conception, ſo that generation may follow; to wit, diverſity of ſex, congreſſion, and emiſſion of ſeed. Without diverſity of ſexes thee can be no conception; For, though ſome will have a woman to be an animal that can engender of herſelf, it is a great miſtake; there can be no conception without a man to diſcharge his ſeed into her womb. What they alledge of pullets laying eggs without a cock's treading them is nothing to the purpoſe; for thoſe eggs, ſhould they be ſet under a hen, will never become chickens, becauſe they never received any prolific virtue from the male; which is abſolutely neceſſary to this purpoſe, and is ſufficient to convince us that diverſity of ſex is neceſſary even to thoſe animals as well as to the generation of man. But diverſity of ſex, though it be neceſſary to conception, yet it will not do alone; there muſt alſo be a congreſſion of thoſe different ſexes: for diverſity of ſex would profit little, if copulation did not follow. I confeſs I have heard of ſome ſubtle women, who, to cover their ſin and ſhame, have endeavoured to perſuade ſome perſons that they were never touched by men, to get them with child; and that one in particular pretended to conceive, by going into a bath where a man had waſhed himſelf a little before, and ſpent his ſeed in it, which was drawn and ſucked into her womb, as ſhe pretended: But ſuch ſtories as thoſe are only fit to amuſe them that know no better—Now that theſe different ſexes ſhould be obliged to come to the touch, which we call copulation or coition, beſides the natural deſire of begetting their like, which ſtirs up men and women to it, the parts appointed for generation are endowed by nature with a delightful and mutual itch, which begets in them deſire to the action; without which it would not be very eaſy for a man born for the contemplation of divine myſteries to join himſelf by the way of coition to a woman, in regard of the uncleanneſs of the part and of the action; and on the other ſide, if women did but think of thoſe pains and inconveniences to which they are ſubject by their great bellies, and thoſe hazards even of life itſelf, beſides the unavoidable pains that attend their delivery, it is reaſonable to believe they would be affrighted from it. But neither ſex make theſe reflections till after the action is over, conſidering nothing before hand but the pleaſure of enjoyment. So that it is from this voluptuous itch that nature obligeth both ſexes to this congreſſion. Upon which the third thing followeth of courſe, to wit, the emiſſion of ſeed into the womb in the act of copulation. For the woman having received this prolific ſeed into her womb, and retained it there, the womb thereupon becomes compreſſed, and embraces the ſeed ſo cloſely, that being cloſed, the point of a needle, as ſaith Hippocrates, cannot enter it without violence; and now the woman may be ſaid to have conceived; the ſeveral faculties which are in the ſeed it contains, being reduced by its heat from power into action, making uſe of the ſpirits with which the ſeed abounds, and which are the inſtruments by which it begins to trace out the firſt lineaments of all the parts; to which afterwards, of making uſe of the menſtruous blood flowing to it, it gives in time growth and final perfection. And thus much ſhall ſuffice to ſhew what conception is. I ſhall now proceed to ſhew.

SECTION II. *The Signs of Conception.*

THERE are many prognosticks or signs, of conception: I will name some of the chief, which are the most certain, and let alone the rest.

1. If a woman has been more than ordinary desirous of copulation, and hath taken more pleasure than usual therein (which upon recollection she may easily know) it is a sign of conception.

2. If she retain the seed in her womb after copulation, which she may know if she perceives not to flow down from the womb as it used to do before, for that is a sure sign the womb has received it into the inward orifice, and there retains it.

3. If she finds a coldness and chilness after copulation, it shews the heat is retired to make conception.

4. If after this she begins to have loathings to those things which she loved before, and this attended with a loss of appetite, and a desire after meats, to which she was not affected before, and hath often nauseatings and vomitings, with sour belchings, and exceeding weakness of stomach.

5. After conception the belly waxeth very flat, because the womb closeth itself together, to nourish and cherish the seed, contracting itself so as to leave no empty space.

6. If the veins of the breast are more clearly seen than they were wont to be, it is a sign of conception.

7. So it is, if the tops on the nipples look redder than formerly, and the breasts begin to swell, and grow harder than usual, especially if this be attended with pain and soreness.

8. If a woman hath twisting and griping pains, much like those of the cramp in the belly, and about the navel it is a sign she has conceived.

9. If under the lower eye lid the veins be swelled, and appear clearly, and the eye be something discoloured, it is a certain sign she is with child, unless she have her menses at the same time upon her, or that she has sat up the night before. This sign has never failed.

10. Some also make this trial of conception; they stop the woman's urine in a glass or phial for three days, and then strain it through a fine linen cloth, and if they find small living creatures in it, they conclude that the woman has certainly conceived.

11. There also is another easy trial: let the woman that supposes she has conceived take a green nettle, and put it into her urine, cover it close, and let it remain therein a whole night: if the woman be with child it will be full of red spots on the morrow; but if she be not with child it will be blackish.

12. The last sign I shall mention is that which is most obvious to every woman, which is the suppression of the terms: For, after conception, nature makes use of that blood for the nourishment of the embryo which before was cast out by nature, because it was too great in quantity. For it is an error to think that the menstrual blood, simply in itself considered is bad; because if a womans body be in good temper, the blood must needs be good: and that it is voided monthly because it offends in quantity, but not in quality. But though the suppression of the terms is generally a sure sign of conception to such persons as have had them orderly before, yet is not the having them always a sign there is no conception: Forasmuch as many that have

been with child have had their terms, and some even till the fifth or sixth month, which happens according to the woman's being more or less sanguine; for if a woman has more blood than will suffice for the nourishment of the embryo, nature continues to void it in the usual way. Whence the experienced midwife may learn there are few general rules which do not sometimes admit of an exception. But this shall suffice to be spoken of the signs and prognosticks of conception.

SECTION III. *Whether Conception be of a Male or Female.*

AUTHORS give us several prognosticks of this: Though they are not all to be trusted, yet there is some truth among them: The signs of a male child conceived are.

1. When a woman at her rising up is more apt to stay herself upon her right hand than her left.

2. Her belly lies rounder and higher than when she has conceived of a female.

3. She first feels the child to beat on her right side.

4. She carries her burden more light, and with less pain than when it is a female.

5. Her right nipple is redder than the left, and her right breast harder and more plump.

6. Her colour is more clear, nor is she so swathy as when she has conceived a female.

7. Observe a circle under her eye, which is a pale and bluish colour; and if that under her right eye be most apparent, and most discoloured she hath conceived a son.

8. If she would know whether she hath conceived a son or a daughter, let her milk a drop of her milk into a bason of fair water; if it spreads and swims at top, it certainly is a boy; but if it is round as it drops in, and sinks to the bottom, it is a girl. This last is an infallible rule. And in all it is to be noted, that what is a sign of a male conception, the contrary holds good of a female.

SEC. IV. *How a woman ought to order herself after conception.*

MY design in this treatise being brevity, I shall pretermit all that others say of the causes of twins; and whether there be any such thing as superfœtations, or a second conception in woman, which is yet common enough, when I come to shew you how the midwife ought to proceed in the delivery of these women that are pregnant with them. But having already spoken of conception, I think it now necessary to shew how such as have conceived ought to order themselves during their pregnancy, that they may avoid those inconveniencies which often endanger the life of the child, and many times their own.

A woman after her conception, during the time of her being with child, ought to be looked on as indisposed or sick, though in good health; for child-bearing is a kind of nine month's sickness, being all that time in expectation of many inconveniences, which such a condition usually causes to those that are not well governed during that time; and therefore ought to resemble a good pilot, who, when sailing in a rough sea and full of rocks; avoids and shuns the danger, if he steers with prudence; but if not it is a thousand to one but he suffers shipwreck. In like manner, a woman with child is often in dan-

ger of miscarrying and losing her life, if she is not very careful to prevent those accidents to which she is subject all the time of her pregnancy: all which time her care must be double, first of herself, and secondly of the child she goes with, for otherwise a single error may produce a double mischief; for if she receives any prejudice, her child also suffers with her.

Let a woman therefore, after conception, observe a good diet, suitable to her temperament, custom, condition and quality: and if she can, let the air where she ordinarily dwells be clear and well tempered free from extremes either of heat or cold; for being too hot, it dissipatheth the spirits too much, and causeth many weaknesses, and by being too cold and foggy, it may bring down rheums and distillations on the lungs, and so cause her to cough, which by its impetuous motions forcing downwards, may make her miscarry: She ought also to avoid all nauseous and ill smells, for sometimes the stink of a candle not well put out may cause her to come before her time; and I have known the smell of charcoal to have the same effect. Let her also avoid smelling of rue, mint, pennyroyal, castor, brimstone, &c.

But with respect to her diet, women with child have generally so great loathings, and so many different longings, that it is very difficult to prescribe an exact diet for them. Only this I think adviseable, that they may use of those meats and drinks which are to them most desirable, though perhaps not in themselves so wholesome as some others, and it may not be so pleasant; but this liberty must be made use of with this caution, that what she so desires be not in itself absolutely unwholesome; and also that in every thing they take care of excess. But if a child-bearing woman finds herself not troubled with such longings as we have spoken of, and in such quantity as may be sufficient for herself and the child which her appetite may in a great measure regulate; for it is alike hurtful for her to fast too long as to eat too much, and therefore rather let her eat a little and often, especially let her avoid eating too much at night; because the stomach, being too much filled, compresseth the diaphragm and thereby causes difficulty of breathings. Let her meat be easy of concoction, such as the tenderest parts of beef, mutton, veal, sows, pullets, capons, pidgeons and partridges, either boiled or roasted, as she likes best; new laid eggs are also very good for her; and let her put into her broths those herbs that purify it, as sorrel, lettuce, succory and burrage; for they will purge and purify the blood; Let her avoid whatsoever is hot seasoned, especially pies and baked meets, which, being of hot digestion, overcharge the stomach. If she desire fish, let it be fresh, and such as is taken out of rivers and running streams. Let her eat quinces, or marmalade, to strengthen her child; for which purpose sweet almons, honey, sweet apples, and full ripe grapes, are also good. Let her abstain from all sharp, sour, bitter, and salt things, and all things that tend to provoke the terms, such as garlick, onions, olives, mustard, fennel, with pepper and all spices, except cinnamon, which in the last three months is good for her. If at first her diet be sparing as she increases in bigness let her diet be increased for she ought to consider she has a child as well herself to nourish. Let her be moderate in her drinking; and if she drinks wine, let it be rather claret than white (which will breed good blood, help the digestion, and comfort the

ſtomach, which is always but weakly during her pregnancy) but white wine being diuretic, or that which provokes urine ought to be avoided. Let her have a care of too much exerciſe, and let her avoid dancing, riding in a coach, or whatever elſe puts the body into violent motion, eſpecially in her firſt month. But to be more particular I ſhall here ſet down rules proper for every month for the child bearing woman to order herſelf, from the time ſhe has firſt conceived to the time of her delivery.

Rules for the firſt two Months.

AS ſoon as a woman knows or has reaſon to believe, ſhe hath conceived, ſhe ought to abſtain from all violent motion or exerciſe, whether in walking, riding on horſeback, or in a coach. Let her alſo abſtain from venery, to which, after conception, ſhe has uſually no great inclination, leſt there be a mole or ſuperfœtation; which is the adding of one embryo to another. Let her beware ſhe lift not her arms too high, nor carry great burdens, nor repoſe herſelf on hard and uneaſy ſeats. Let her uſe moderately meat of good juice and eaſy concoction, and let wine be neither too ſtrong nor too ſharp, but a little mingled with water; or, if ſhe be very abſtemious, ſhe may uſe water wherein cinnamon is boiled. Let her avoid faſtings, thirſt, watching, mourning, ſadneſs, anger and all other perturbations of the mind. Let none preſent any ſtrange or unwholeſome things to her, not ſo much as name it, leſt ſhe ſhould deſire it, and not be able to get it, and ſo either cauſe her to miſcarry, or the child have ſome deformity on that account. Keep her belly looſe with prunes, raiſins or manna, in her broth; and let her uſe the following electuary to ſtrengthen the womb and the child.

"Take conſerve of burrage, bugloſs, and red roſes, two ounces each; balm, citron peel, and mirobalans, candied, each an ounce; extract of wood aloes a ſcruple; pearl prepared half a dram; red coral, ivory each a dram; precious ſtones each a ſcruple, candied nutmegs two drams; and with ſyrup of apples and quinces make an electuary.

Let her uſe the following Rules.

"Take pearls prepared a dram; red coral prepared and ivory, each half a dram, precious ſtones each a ſcruple; yellow citron peels, mace, cinnamon, cloves, each half a dram, ſaffron a ſcruple, wood aloes half a ſcruple; ambergreaſe ſix drams, and with ſix ounces of ſugar, diſſolved in roſe water, make rouls." Let her alſo apply ſtrengtheners to the naval, of nutmegs, mace, maſuc, made up in bags, or a toaſt dipped in mamſey, ſprinkled in powder of mint, If ſhe happens to deſire clay, chalk, or coal (as many women with child do) give her beans boiled with ſugar; and if ſhe long for any thing which ſhe cannot obtain, let her preſently drink a large draught of pure cold water.

Rules for the Third Month.

In this month and the next, be ſure to keep from bleeding; for though it may be ſafe at other times, it will not be ſo until the end of the fourth month: and yet if too much blood abound, or ſome incident diſeaſe happen, which requires evacuation, you may uſe a cupping glaſs, with ſcarification, and a little blood may be drawn from the ſhoulders and arms, eſpecially if ſhe has been accuſtomed to bleed. Let her alſo take care of lacing herſelf too ſtraightly, but give herſelf more liberty than ſhe uſed to do; for, incloſing her belly in too ſtraight a mould, ſhe hinders the infant from taking its free growth, and often makes it come before its time.

Rules for the Fourth Month.

In this month you ought alſo to keep the child bearing woman from bleeding, unleſs in extraordinary caſes; but when this month is paſt, blood-letting and phyſic may be permitted, if it be gentle and mild; and perhaps it may be neceſſary to prevent abortion. In this month ſhe may purge in acute diſeaſes; but purging may be only uſed from the beginning of this month to the end of the ſixth: but let her take care that in purging ſhe uſes no vehement medicine, nor very bitter, as aloes, which is an enemy to the child, and opens the mouth of the veſſels; neither let her uſe coloquintida, ſcammony, nor turbith; ſhe may uſe caſſia, manna, rhubarb, agaric, and ſenna, but diacidonium purgans is beſt with a little of the electuary of the juice of roſes.

Rules for the Fifth, Sixth and Seventh Months.

In thoſe months child bearing women are often troubled with coughs, heart beating, fainting, watching, pains in the loins and hips, and bleeding. The cough is from a ſharp vapour that comes to the jaws and rough artery from the terms, or from the thin part of that blood gotten into the veins of the breaſt, or fallen from the head to the breaſt: This endangers abortion, and ſtrength fails from watching; therefore purge the humours that fall from the breaſt with rhubarb and agaric, and ſtrengthening the head as in a catarrh, and give ſweet lenitives as in a cough. Palpitation and fainting ariſe from a vapour that go to it by the arteries or from blood that aboundeth, and cannot get out at the womb, but aſcends and oppreſſeth the heart; and, in this caſe, cordials ſhould be uſed both inwardly and outwardly. Watching is from ſharp, dry vapours that trouble the animal ſpirits; in this caſe uſe frictions, and let the woman waſh her feet at bed time, and let her take ſyrup of poppies, dried roſes, emulſions of ſweet almonds and white poppy ſeeds. If ſhe be troubled with pains in her loins and hips, as in theſe months ſhe is ſubject to be from the weight of her child, who is now grown big and heavy, and ſo ſtretcheth the ligaments of the womb, and parts adjacent, let her hold it up with ſwathing bands about her neck. About this time alſo the woman often happens to have a flux of blood, either at the noſe, womb, or hemorrhoids, from plenty of blood or from the weakneſs of the child that takes it not in, or elſe from evil humours in the blood, that ſtirs up nature to ſend it forth. And ſometimes it happens that the veſſels of the womb may be broken, either by ſome violent motion, fall, cough or trouble of mind; (for any of theſe will work that effect) and this is ſo dangerous, that in ſuch a caſe the child cannot be well; but if it be from blood only, the danger is no leſs, provided it flows by the veins of the neck of the womb, for then it prevents plethory, and takes away the nouriſhment of the child; but if it proceeds from the weakneſs of the child that draws it not, abortion of the child often follows, or hard travail, or elſe ſhe goes beyond her time: But if it flows by the inward veins of her womb, there is more danger by the openneſs of the womb, if it comes from evil blood; the danger is alike from cacochymy, which is like to fall upon both. If it ariſes from plethory, open a vein, but with very great caution, and give her aſtringents, ſuch as the following; "Take pearl prepared a ſcruple; red coral two ſcruples, mace, nutmegs, each a dram; cinnamon, half a dram; make a powder, or with ſugar, rou's." Or, give this powder in broth: "Take red coral a dram; precious ſtones half a ſcruple: red ſaunders half a dram; ſealed earth, and tormentil roots, each two ſcruples, with ſugar of roſes, and manus Chriſti,

with pearl five drams, make a powder." You may alſo ſtrengthen the child at the naval; and if there be a cacochimy, alter the humours, and evacuate, if you may do it ſafely: You may likewiſe uſe amulets on her hands, and about her neck. In a flux of hemorrhoids, let her drink hot wine with a toaſted nutmeg. In theſe months the belly is alſo ſubject to be bound; but if it be without any apparent diſeaſe, the broth of a chicken, or of veal ſodden with oil, or with the decoction of mallows, mercury, and lintſeed put up in a clyſter, will not be amiſs, but in leſs quantity than is given in other caſes; to wit, of the decoction five ounces, of common oil three ounces, of ſugar two ounces, of caſſia fiſtula one ounce. But if ſhe will not take a clyſter, one or two yolks of new laid eggs; or a few peaſe pottage warm, with a little ſalt and ſugar, ſupped up a little before meat, will be very convenient: But if her belly ſhall be diſtended, and ſtretched out with wind, a little fennel-ſeed and anniſeed reduced into powder, and mingled with honey and ſugar, made after the manner of an electuary, will do very well. Alſo, if the thighs and feet ſwell, let them be anointed with oxphrodium (which is a liquid medicine made with vinegar and roſe water) mingled with a little ſalt.

Rules for the Eighth Month.

The eighth is commonly the moſt dangerous, and therefore the greateſt care and caution ought to be uſed; and her diet ought to be better in quality, but not more, nor indeed ſo much in quantity as before; but as ſhe muſt abate her diet, ſo ſhe muſt increaſe her exerciſe: And becauſe then women with child, by reaſon of the ſharp humours, alter the belly, are accuſtomed to weaken their ſpirits and ſtrength, they may well take before meat and electuary of diarrhodon or aromaticum roſatum, or diamargariton; and as they will loath and nauſeate their meat they may take green ginger condited with ſugar, or the rinds of citrons and oranges condited; and often uſe honey for the ſtrengthening of the infant. When ſhe is not far from her labour, let her uſe every day ſeven roaſted figs before meat and ſometimes lick a little honey; but let her beware of ſalt and powder meat, for it is neither good for her nor the child.

Rules for the Ninth Month.

In the ninth month, let her have a care of lifting any great weight; but let her move a little more to dilate the parts and ſtir up natural heat. Let her take heed of ſtooping, and neither ſit too much nor lie on her ſides; neither ought ſhe to bend herſelf much, leſt the child be unfolded in the umbilical ligaments, by which means it often periſhes. Let her walk and ſtir often, and let her exerciſe be rather to go upwards than downwards: let her diet now eſpecially be light and eaſy of digeſtion; as damaſk prunes, with ſugar, or figs and raiſins, before her meat; as alſo the yolk of eggs, fleſh and broth of chickens, birds, partridges, and pheaſants; aſtringent and roaſted meats, with rice, and hard eggs, millet, and ſuch like other things are proper; baths of ſweet water, with emollient herbs, ought to be uſed by her this month without intermiſſion. And after the bath, let her belly be annointed with oil of roſes and violets; but for her privy parts, it is fitter to anoint them with the fat of hens, geeſe, or ducks, or with oil of lillies, and the decoction of lintſeed and fenugreek, boiled with oil of lintſeed and marſhmallows, or with the following liniment.

"Take of mallows and marſhmallows, cut and ſhred, of each an ounce; of lintſeed one ounce; let them be boiled from twenty ounces of water to ten; then let her take three ounces of boiled broth: of oil of almonds, and

oil of ſtour-de-luce, of each one ounce; of deer's ſuet three ounces; let hot bathe with this, and anoint herſelf with it warm."

If for fourteen days before the birth ſhe do every morning and evening bath and moiſten her belly with muſcadine and lavender water, the child will be much ſtrengthened thereby. And if every day ſhe eat roaſted bread, it will hinder any thing from growing to the child. Her privy parts may be alſo gently ſtroaked down with this fomentation.

"Take three ounces of lintſeed; of mallows and marſhmallows ſliced, of each one handful; let them be put into a bag, and boiled immediately: and let the woman with child every morning and evening take the vapour of this decoction in a hollow ſtool taking great heed that no wind or air come to her in any part, and then let her wipe the part ſo anointed with a linen cloth, that ſhe may anoint the belly and groins as at firſt. When ſhe is come ſo near her time as to be within ten or fourteen days thereof, if ſhe begins to feel any more than ordinary pain, let her uſe every day the following:

"Take mallows, and marſhmallows, of each one handful: camomile, herd mercury, maiden hair, of each half a handful: of lintſeed four ounces; let them be boiled in ſuch a ſufficient quantity of water as may make a broth therewith." But let her not ſit too hot upon the ſeat, nor higher than a little above her naval; nor let her ſit on it longer than about half an hour, let her ſtrength languiſh and decay, for it is bettet to uſe it often, than to ſtay too long in it. And thus I have ſhewn how a child bearing woman ought to govern herſelf in each month during her pregnancy. How ſhe muſt order herſelf at her delivery, ſhall be ſhewn in another chapter, after I have firſt ſhewn the induſtrious Midwife how the child is formed in the womb, and the manner of its decumbiture there.

CHAP. I.

Of the Parts proper to a Child in the Womb; how it is formed there, and the manner of its ſituation therein.

IN the laſt chapter I ſhewed what conception was, how accompliſhed, its ſigns and how ſhe who hath conceived ought to order herſelf during the time of her pregnancy. Now, before I ſpeak of her delivery, it is neceſſary that the midwife be firſt acquainted with the parts proper to a child in the womb, and alſo how it is formed and the manner of its ſituation and decumbiture there; without the knowledge of which, no one can tell how to deliver a woman as ſhe ought. This therefore ſhall be the work of this chapter. I ſhall begin with the firſt of theſe.

SECTION I. *Of the parts proper to a Child in the Womb.*

IN this ſection I muſt firſt tell you what I mean by the parts proper to a child in the womb, and they are only thoſe that either help or nouriſh it, whilſt it is lodged in that dark repoſitory of nature, and that help to clothe and defend it there, and are caſt away, as of no uſe, after it is born, and theſe are two, viz. the umbilicum, or naval veſſels, and the ſecundium, by the firſt it is nouriſhed, and by the ſecond clothed and defended from wrong. Of each of theſe I ſhall ſpeak diſtinctly, and, firſt.

Of the Umbilicum, or Naval Veſſels.

Theſe are four in number, viz. one vein, two arteries, and the veſſel which is called urachos: 1. The vein is that by which the infant is nouriſhed, from the time of its conception, to the time of its delivery; till being brought into the light of this world, it has the ſame way of concocting its

food that we have. This vein ariſeth from the liver of the child, and is divided into two parts when it hath paſſed the navel; and theſe two are again divided and ſubdivided, the branches being upheld by the ſkin called chorion (of which I ſhall ſpeak by and by) and are joined to the veins of the mother's womb, from thence they have their blood for the nouriſhment of the child. 2. The arteries are two on each ſide, which proceed from the back branches of the great artery of the mother; and the vital blood is carried by theſe to the child, being ready concocted by the mother. 3. A nervous or ſinewy production is led from the bottom of the bladder of the infant to the navel, and this is called urachos; and its uſe is to convey the urine of the infant from the bladder to the alantois. Anatomiſts do very much vary in their opinions concerning this; ſome denying any ſuch thing to be in the delivery of women, and others affirming it: but experience teſtifies there is ſuch a thing: For Bartholomew Cabrolius, the ordinary doctor of anatomy to the college of phyſicians at Montpelier in France, records the hiſtory of a maid, whoſe water being a long time ſtopped, at laſt iſſued out through her navel; And Johannes Fernnelius ſpeaks of the ſame thing that happened to a man of thirty years of age, who having a ſtoppage in the neck of the badder, his urine iſſued out of his navel many months, together, without any prejudice at all to his health, which he aſcribes to the ill lying of his navel, whereby the urachos was not well dried. And Volchier Coitas quotes ſuch another inſtance in a maid of thirty-four years, at Nuremberg in Germany. Theſe inſtances, though they happen but ſeldom, are ſufficient to prove that there is ſuch a thing as an urachos in men. Theſe four veſſels before mentioned, viz. one vein, two arteries, and the urachos, do join near to the navel, and are united by a ſkin which they have from the chorion, and ſo become like a gut or rope, and are altogether void of ſenſe; and this is that which the good women call the navel ſtring. The veſſels are thus joined together, that ſo they may neither be broken, ſevered, nor entangled: and when the infant is born are of no uſe, only ſave to make up the ligament, which ſtops the whole of the navel and ſome other phyſical uſe, &c.

Of the Secundine or After Birth.

Setting aſide the name given to this day by the Greeks and Latins, it is called in Engliſh by the name of Secundine, After-birth, and After-burden, which are held to be four in number.

1. The firſt is called Placenta, becauſe it reſembles the form of a cake, and is knit both to the navel and chorion, and makes up the greateſt part of the ſecundine or after-birth. The fleſh of it is like that of the milt, or ſpleen, ſoft, red, and tending ſomething to blackneſs, and hath many ſmall veins and arteries in it; and certainly the chief uſe of it is for containing the child in the womb.

2. The ſecond is the Chorion. This ſkin, and that called the Amnios, involve the child round, both above and underneath, and on both ſides, which the Alantois doth not: This ſkin is that which is moſt commonly called the ſecundine, as it is thick and white, garniſhed with many ſmall veins and arteries, ending in the Placenta before named, being very light and ſlippery. Its uſe is not only to cover the child round about, but alſo to receive and ſafely bind up the roots and the veins and arteries, or navel veſſels before deſcribed.

3. The third thing which makes up the ſecundine, is the Alantois, of which there is a great diſpute among anatomiſts; ſome ſaying there is ſuch a thing and others that there is not: Thoſe that will have it to be a mem-

brane, fay, it is white, ſoft, and exceeding thin, and juſt under the Placenta, where it is knit to the Urachos, from whence it receives the urine; and its office is to keep it ſeparate from the ſweat, that the ſaltneſs of it may not offend the tender ſkin of the child.

4. The fourth and laſt covering of the child is called Amnois, and it is white, ſoft, and tranſparent, being nouriſhed by ſome very ſmall vens and arteries. Its uſe is not only to enwarp the child round, but alſo to retain the ſweat of the child.

Having thus deſcribed the parts proper to the child in the womb, I will next proceed to ſpeak of the formation of the child therein, as ſoon as I have explained the hard terms in this ſection, that thoſe for whoſe help this is deſigned, may underſtand what they read. There is none ſo ignorant as not to know that a vein is that which receives blood from the liver, and diſtributes it in ſeveral branches to all parts of the body. Arteries proceed from the heart, are in continual motion, and by that motion quicken the body. Nerve is the ſame with ſinew, and is that which the brain adds ſenſe and motion to the body. Placenta properly ſignifies a ſugar cake; but in this ſection it is uſed to ſignify a ſpungy piece of fleſh, reſembling a cake, full of veins and arteries, and is made to receive the mother's blood, appointed for the infant's nouriſhment in the womb. Chorion is the outward ſkin which compaſſeth the child in the womb. The Amnois is the inner ſkin which compaſſeth the child in the womb. The Alantois is the ſkin that holds the urine of the child during the time that it abides in the womb. The Urachos is the veſſel that conveys the urine from the child in the womb to the Alantois, I now proceed to.

SECTION II. *Of the Formation of the Child in the Womb.*

TO ſpeak of the formation of the child in the womb, we muſt begin where nature begins; and that is, at the act of coition, in which the womb having received the generative ſeed, without which there can be no conception, the womb immediately ſhuts up itſelf ſo cloſe that not the point of a needle can enter the inward orifice; and this it does partly to hinder the iſſuing out of the ſeed again, and partly to cheriſh it by an inbred heat, the better to provoke it to action; which is one reaſon why women's bellies are ſo lank at their firſt conception. The woman having thus conceived, the firſt thing which is operative in the conception, is the ſpirit, whereof the ſeed is full, which nature, quickening by the heat of the womb, ſtirs it up to action. This ſeed conſiſts of very different parts, of which ſome are more, and ſome are leſs pure. The internal ſpirit therefore ſeparateth thoſe parts that are leſs pure, which are thick, cold, and clammy, from them that are more pure and noble. The leſs pure are caſt to the outſides, and with them the ſeed is circled round, and of them the membranes are made, in which that ſeed which is the moſt pure is wrapped round, and kept cloſe together, that it may be defended from cold and other accidents, and operate the better.

The firſt that is formed is the amnois, the next the chorion; and they enwrap the ſeed round as it were a curtain. Soon after this (for the ſeed thus ſhut up in the woman lies not idle) the navel vein is bred, which pierceth thoſe ſkins, being yet very tender, and carries a drop of blood from the veins of the mother's womb to the ſeed; from which drop is formed the liver, from which liver there is quickly bred the

vena cava, or chief vein, from which all the reſt of the veins that nouriſh the body ſpring; and now the ſeed hath ſomething to nouriſh it, whilſt it performs the reſt of nature's work, and alſo blood adminiſtered to every part of it to form fleſh.

This vein being formed, the naval arteries are ſoon after formed, then the great artery, of which all others are but branches, and then the heart; for the liver furniſheth the arteries with blood to form the heart, the arteries being made of ſeed, but the heart and the fleſh of blood. After this the brain is formed, and then the nerves, to give ſenſe and motion to the infant. Afterwards the bones and fleſh are formed, and of the bones, firſt the vertebræ or chine bones, and then the ſkull, &c.

As to the time in which this curious part of nature's workmanſhip is formed, phyſicians aſſign four different ſeaſons wherein this microcoſm is formed, and its formation perfected in the womb: The firſt is immediately after coition; the ſecond time of forming, ſay they, is when the womb by the force of its own innate power and virtue makes a manifeſt mutation or coagulation in the ſeed, ſo that all the ſubſtance thereof ſeems coagulated fleſh and blood, which happens about the twelfth or fourteenth day after copulation: and though this concretion of fleſhy maſs abounds with ſpirits, yet it remains undiſtinguiſhable without any form, and may be called a rough draught of the fœtus or embryo. The third time in which this fabric is come to ſome further maturity is, when the principal parts may be in ſome meaſure diſtinguiſhed, and one may diſcern the liver, umbellical veins, arteries, nerves, brain, and heart: and this is about eighteen days after conception. The fourth and laſt time aſſigned by phyſicians for the formation of the child, is about the thirtieth day after conception for a male, but, for a female, they tell us forty two or forty-five days are required, though for what reaſon I know not, nor does it appear by the birth; for if the male receives its formation fifteen days ſooner than the female, why ſhould it not be born ſo much ſooner too. But as to that, every day's experience ſhews us the contrary; for women go the full time of nine months both with male and female. But at this time of thirty days (or ſome will have it forty-five) the outward parts may be alſo ſeen exquiſitely elaborate, and diſtinguiſhed by joints; and from this time the child begins to be animated, though as yet there is no ſenſible motion; and has all the parts of the body, though ſmall and very tender, yet intirely formed and figured, altho' not longer in the whole than one's middle finger: and from thence forward the blood flowing every day more and more to the womb, not by Intervals like their courſes, but continually, it grows bigger and ſtronger to the end of nine months, being the full time of a woman's ordinary labour.

Very great have been the diſputes among both philoſophers and phyſicians about the nouriſhment of the child in the womb, both as to what it is, and which way it receives it. Almæon was of opinion that the infant drew in its nouriſhment by its whole body, becauſe it is rare and ſpungy, as a ſpunge ſucks in water on every ſide; and ſo he thought the infant ſucked blood, not only from its mother's veins, but alſo from the womb. Democritus held that the child ſucked in the nouriſhment at its mouth. Hippocrates affirms that the child ſucks in both nouriſhment and breath by its mouth from the mother, for which he gives two reaſons; 1. That it will ſuck as ſoon as it is

born, and there must have learnt to suck before. 2. Because there are excrements found in the guts as soon as it is born. But neither of these reasons are sufficient to prove his assertion; For, as to the first, "That the child will suck as soon as it is born," it is from a natural instinct; for take a young cat that never saw her dam catch a mouse, and yet she will catch mice herself as soon as she is able. And as to his second reason, it is a sufficient answer to say, that the excrements found in the guts of an infant new born are not excrements of the first concoction, which is evident, because they don't stink, but are the thickest part of the blood, which is conveyed from the vessels of the spleen to the guts. Having therefore said enough to confute the opinion of the child's receiving the nourishment by the mouth, I do affirm that the child receives its nourishment in the womb by the navel; and, that it should be so, is much more consonant to truth and reason; which, being granted, it will easily follow that the nourishment the child receives is the pure blood conveyed into the liver by the navel-vein, which is a branch of the vena porta, or great vein, and passes to the small veins of the liver. Here this blood is made most pure, and the thicker and rawer part of it is conveyed to the spleen and kidneys, and the thick excrement of it to the guts, which is that excrement found there so soon as they are born. The pure part is conveyed to the vena cava, and by it distributed throughout the body by the small veins, which like so many small rivulets, pass to every part of it. This blood is accompanied (as all blood is) with a certain watery substance, the better to convey it through the passage it is to run in, which as in men, is breathed out by sweating, and contained in the amnois, as I have already said.

SECTION III. *Of the Manner of the Child's lying in the Womb.*

I COME now to shew after what manner the child lies in the womb, a thing so essential for a midwife to know that she can be no midwife who is ignorant of it; and yet, even about this authors extremely differ: For there is not two in ten that agree what is the form that the child lies in the womb, or in what fashion it lies there; and yet this may arise in a great measure from the different figures that the child is found in, according to the different times of the woman's pregnancy: for near the time of its deliverance out of those winding chambers of nature, it oftentimes changes the form in which it lay before, for another. Hippocrates affirms the child is so placed in the womb as to have its hands, its knees, and its head bent down towards its feet, so that it lies round together, its hands upon both its knees, and its face between them; so that each eye toucheth each thumb, and its nose betwixt its knees: And Bartholinus was also of the same opinion. Columbus describes the posture of the child thus; "The right arm bowed, the fingers whereof under the ear and above the neck; the head bowed down, so that the chin toucheth the breast, the left arm bowed above both breast and face, and the left arm is propped up by the bending of the right elbow; the legs are lifted upwards, the right of which is so lifted up that the thigh toucheth the belly, the knees the navel, the heel the left buttock, and the foot is turned back and covereth the secrets; the left thigh toucheth the belly, and the leg is lifted up to the breast, the back lying outward. And thus much shall suffice concerning the opinion of authors.

I will now ſhew the ſeveral ſituations of the child in the womb, according to the different times of pregnancy, by which thoſe that are contrary to nature, and are the chief cauſe of all labours, will be the more eaſily conceived by the underſtanding midwife: It ought therefore, in the firſt place, to be obſerved, that the infants, as well male as female, are generally ſituated in the midſt of the womb; for though ſometimes to appearance a woman's belly ſeems higher on one ſide than the other, yet it is ſo with reſpect to her belly only, and not of her womb, in the midſt of which it is always placed.

But in the ſecond place, a woman's great belly makes different figures, according to the different times of pregnancy; for when ſhe is young with child, the embryo is always found of a round figure, a little oblong, having the ſpine moderately turned inwards, the thighs folded and a little raiſed, to which the legs are ſo joined that the heels touch the buttock; the arms are bending, and the hands placed upon the knees; towards which the head is inclining forwards, ſo that the chin toucheth the breaſt; in which poſture it reſembles one's ſitting to eaſe nature and, ſtooping down with the head to ſee what comes from him. The ſpine of its back is at that time placed towards the mother's and the head uppermoſt, the face forwards, and the feet downwards; proportionably to its growth, it extends its members by little and little, which were exactly folded the firſt month. In this poſture it uſually keeps till the ſeventh or eight months, and then by a natural propenſity and diſpoſition of the upper part of the body, the head is turned downwards towards the inward oriſice of the womb, tumbling as if it were over its head, ſo that then the feet are uppermoſt, and the face towards the mother's great gut; and this turning of the infant in this manner, with his head downwards, towards the latter end of a woman's reckoning is ſo ordered by nature, that it may thereby be the better diſpoſed for its paſſage into the world at the time of its mother's labour which is then not far off; (and indeed ſeveral children turn not at all until the very time of birth) for in this poſture all its joints are moſt eaſily extended in coming forth; for by this means the arms and legs cannot hinder its birth, becauſe they cannot be bended againſt the inward oriſice of the womb; and the reſt of the body, being very ſupple, paſſeth without any difficulty after the head, which is hard and big, being paſt the birth. It is true, there are divers children that lie in the womb in another poſture, and come to the birth with their feet downwards, eſpecially if there be twins; for then by their different motions they ſo diſturb one another, that they ſeldom come both in the ſame poſture at the time of labour, but one will come with the head, and another with the feet, or perhaps lie croſs, and ſometimes one of them will come right. But however the child may be ſituated in the womb, or to whatever poſture it preſents itſelf at the time of birth, if it be not with its head forwards, as I have before deſcribed, it is always againſt nature; and the delivery will occaſion the mother more pain and danger, and require greater care and ſkill from the midwife than when the labour is more natural.

CHAP. IV.

A Guide for Women in Travail, ſhewing what is to be done when they fall in Labour, in order for their Delivery.

THE end of all what we have been treating of, is the bringing forth of a child into the world with ſafety both to the mother and to

it. The whole time of a woman's pregnancy may very well
ed a kind of labour; for, from the time of her conception, to
e of her delivery, she labours under many difficulties, is subject
y distempers, and in continual danger, from one cause or anoth-
, till the time of birth comes, and, when that comes, the greatest la-
bour and travail comes along with it; insomuch, that then all her oth-
er, labours are forgotten, and that only is called the time of her la-
bour; and to deliver her safely is the principal business of the midwife.
To assist her herein is the chief design of this chapter. The time of
the child's being ready for its birth, when nature endeavours to cast
it forth, is that which is properly the time of a woman's labour. And,
since many women, especially of their first child, are often mistaken in
their reckoning, and so, when they draw near their time, take every
pain they meet with for their labour, when it is not so, which often
proves prejudicial and troublesome to them, I will in the first section
of this chapter, set down some signs, by which a woman may know
when the true time of her labour is come.

SECTION I. *Signs of the true Time of a woman's Labour.*

WHEN women with their first child, perceive any extraordinary pains in their belly, they immediately send for their midwife, taking it for their labour; and then if the midwife be not a skilful and judicious woman, she will, without further enquiry, take it for granted, and so go about to put her into labour before nature is prepared for it: which may endanger the life both of mother and child, by breaking the amnios and chorion. These pains, which are often mistaken for labour, are removed by warm clothes laid to the belly, and the application of a clyster or two, by which those pains which precede a true labour are rather furthered than hindered. There are also other pains incident to women in that condition from a flux in the belly, which are easily known by the frequent stools that follow them.

The signs therefore of labour some few days before are, that the woman's belly, which before lay high, sinks down, and hinders her from walking so easily as she used to do; also, there flows from the womb slimy humours, which nature has appointed to moisten and smooth the passage, that its inward orifice may be the more easily dilated when there is occasion; which beginning to open at that time, suffers that slime to flow away, which proceeds from the glandules called Prostratæ. These are signs preceding labour; but when she is presently falling into labour, the signs are great pains about the region of the reins and loins, which, coming and reiterating by intervals, answer to the bottom of the belly by congruous throes, and sometimes the face is red and inflamed, the blood being much heated by the endeavours of a woman makes to bring forth her child; and likewise, because during these strong throes her respiration is intercepted, which causes the blood to have recourse to her face: also her privy parts are swelled by the infant's head lying in the birth, which by often thrusting, causes those pains to descend outwards. She is much subject to vomiting which is a sign of good labour and speedy delivery, though by ignorant women thought otherwise, for good pains are thereby excited and redoubled; which vomiting is occasioned by the sympathy there is between the womb and the stomach. Also, when the birth is near, women are troubled with a trembling in the thighs and legs,

not with cold, like the beginning of an ague fit, but with the heat of the whole body, though this does not always happen. When the humours which flow from the womb are discoloured with blood, the midwives call it Shows, and it is an infallible mark of the birth's being near: and if then the midwife put up her fingers into the neck of the womb she will find the inner orifice dilated: at the opening of which, the membranes of the infant containing the waters present themselves, and are strongly forced downwards with each pain she hath; at which time one may perceive them sometimes to resist, and then again press forward the finger, being more or less hard and extended, according as the pains are stronger or weaker. These membranes, with the waters in them, when they are before the head of the child, which the midwives call the Gathering of the Waters, resemble, to the touch of the finger, those eggs which have no shell, but are covered only with a single membrane. After this the pains still redoubling, the membranes are broken by a strong impulsion of the waters, which presently flow away, and then the head of the infant is presently felt naked, and presents itself at the inward orifice of the womb: when these waters come thus away, then the midwife may be assured the birth is very near, this being the most certain sign that can be; for the Amnios and Iantois being broken, which contain those waters, by pressing forward of the birth; the child is no better able to subsist long in the womb afterwards, than a naked man in a heap of snow. Now, these waters, if the child comes presently after them, facilitate the labour, by making the passage slippery; and therefore let no midwife (as some have foolishly done) endeavour to force away the water, for nature knows best when the true time of the birth is, and therefore retains the water till that time. But if by accident the water breaks away too long before the birth, then such things as will hasten it, may be safely admitted; and what those are I shall shew in another section.

SEC. III. *How a Woman ought to be ordered when the Time of her Labour is come.*

WHEN it is known that the true time of a woman's labour is come, by the signs laid down in the foregoing section, of which those that are most to be relied on are pains and strong throes in the belly, forcing downwards towards the womb, and a dilation of the inward orifice, which may be perceived by touching it with the finger, and the gathering of the waters before the head of the child, and thrusting down of the membranes which contain them; through which between the pains, one may with the finger discover the part which presents, as said before, especially if it be the head of the child, by its roundness and hardness. If these things concur, and are evident, the midwife may be sure it is the time of her Labour; and care must be taken to get all things ready that are necessary to comfort the woman in that time. And the better to help her, be sure to see she be not strait-laced: You may also give her a pretty strong clyster, or more, if there be occasion, provided it be done at the beginning, and before the child be too forward. The benefit accruing hereby will be, to excite the gut to discharge itself of its excrements, that so the rectum being emptied, there may be more space for the dilation of the passage; likewise to cause the pains to bear the more downward; through

the endeavours she makes when she is at stool: and, in the mean time, all other necessary things for her labour should be put in order, both for the midwife and the child. To this end some get a midwife's stool, but a pallet bed girted is much the best way, placed near the fire, if the season so require: which pallet ought to be so placed, that there may be easy access to it on every side, that the woman may be the more readily assisted, as there is occasion.

If the woman abounds with blood, to bleed her a little may not be improper, for hereby she will both breathe the better, and have her breasts more at liberty, and likewise more strength to bear down the pain; and this she may do without danger, because the child being about that time ready to be born, has no more need of the mother's blood for its nourishment: Besides, this evacuation does many times prevent her having a fever after her delivery. Also, before her delivery, if her strength will permit, let her walk up and down her chamber; and that she may have strength so to do, it will be necessary to give her some good strengthening things, such as jelly broth, new-laid eggs, or some spoonfuls of burnt wine. And let her, by all means, hold out her pains, bearing them down as much as she can at the time when they take her; and let the midwife from time to time touch the inward orifice with the finger, to know whether the waters are ready to break, and whether the birth will follow soon after; let her also anoint the woman's privities with emollient oil, hog's grease, and fresh butter, if she finds they are hard to be dilated. Let the midwife be all the while near the labouring woman, and diligently observe her gestures, complaints, and pains, for by this she may guess pretty well how her labour advanceth; because when she changeth her ordinary groans into long cries, it is a sign the child is very near the birth; for at that time the pains are greater and more frequent. Let the woman likewise by intervals rest herself on the bed to regain her strength, but not too long, especially if she be little, short and thick, for such women have always worse labour, if they lie long on their beds in their travail; it is better, therefore that they walk, as much as they can, about the chamber, the women supporting her under their arms, if it be necessary, for by this means the weight of the child causeth the inward orifice of the womb to dilate sooner than in bed; and if her pains be stronger and more frequent, her labour will not be near so long.

Let not the labouring woman be concerned at those qualms and vomitings which perhaps she may find come upon her, for they will be much for her advantage in the issue, however uneasy she may be for the time, as they further the throes and pains, provoking downwards. But to proceed:

When the waters of the children are ready and gathered, which may be perceived through the membranes to present themselves to the inward orifice of the bigness of the whole dilation, the midwife ought to let them break of themselves, and not, like some hasty midwives, who being impatient of the woman's long labour, break them, intending thereby to hasten their business, when instead thereof, they retard it; for, by the too hasty breaking of these waters (which Nature designed to cause the infant to slide forth the more easily) the passage remains dry, by which means the pains and throes of the labouring woman are less efficacious to bring forth the infant than they

would otherwiſe have been. It is therefore much the better way to let the waters break of themſelves; after which the midwife may with eaſe feel the child bare by that which firſt preſents, and thereby diſcern whether it comes right, that is, with the head foremoſt, for that is the moſt proper and natural way of its birth; if the head comes right, ſhe will find it round, big, hard, and equal; but if it be in any other part, ſhe will feel it unequal, rugged, and ſoft or hard, according to the nature of the part it is. And this being the true time when the woman ought to deliver, if nature be not wanting to perform its office, therefore when the midwife finds the birth thus coming forward, let her haſten to aſſiſt and deliver it, for it ordinarily happens ſoon after, if it be natural.

But if it happens as ſometimes it may, that the waters break away too long before the birth, in ſuch a caſe thoſe things that haſten nature may be ſafely admitted; to which purpoſe, let her make uſe of pennyroyal, dittany, juniper berries, red coral, betony, and feverfew boiled in white wine, and a draught of it drank; or it would be much better to take the juice of it when it is in its prime, which is in May, and having clarified it, let them make it into a ſyrup, with double its weight of ſugar, and keep it by them all the year, to uſe when occaſion calls for it. Mugwort, uſed in the ſame manner, is alſo good in this caſe. Alſo a dram of cinnamon powder given inwardly profits much in this caſe; and ſo does tanſy bruiſed and applied to the privities, or an oil of it ſo made and uſed as you were taught before. The ſtone Ætites held to the privities is of extraordinary virtue, and inſtantly draws away both child and after-burden, but great care muſt be taken to remove it preſently, or it will draw forth the womb and all; for ſuch is the magnetic virtue of this ſtone, that both child and womb follow it as readily as iron doth the load-ſtone, or as the load-ſtone the North-ſtar.

There are many other things that phyſicians affirm are good in this caſe; among which are, an aſs's or an horſe's hoof hung near the privities; a piece of red coral hung near the ſaid place; a load-ſtone helps much held in the woman's left hand, or the ſkin which a ſnake hath cut off, girt about the middle next the ſkin. Theſe things are mentioned by Mizaldus; but ſetting thoſe things aſide, as not ſo certain, notwithſtanding Mizaldus quotes them, the following preſcriptions are very good to give ſpeedy deliverance to women in travail.

1. A decoction of white wine made in ſavory, and drank.

2. Take wild tanſy, or ſilver weed, bruiſe it, and apply it to the woman's noſtrils.

3. Take date ſtones, and beat them to powder, and let her take half a dram of them in white wine at a time.

4. Take parſley, and bruiſe it, and preſs out the juice, and dip a linen cloth in it, and put it up ſo dipped into the mouth of the womb, it will preſently cauſe the child to come away though it be dead, and will bring away the after-burden. Alſo the juice of parſley is a thing of ſo great virtue (eſpecially ſtone parſley) that being drank by a woman with child, it cleanſeth not only the womb, but alſo the child in the womb, of all groſs humours.

5. A ſcruple of caſtorum in powder, in any convenient liquor, is very good to be taken in ſuch caſe; and ſo alſo is two or three drops of ſpirits of caſtorum in any convenient liquor: alſo eight or nine

drops of ſpirits of myrrh, given in any convenient liquors gives ſpeedy deliverance.

6. Give a woman in ſuch a caſe another woman's milk to drink, it will cauſe ſpeedy delivery, and almoſt without any pain.

7. The juice of leeks, being drank with warm water, hath a mighty operation to cauſe ſpeedy delivery.

8. Take piony ſeeds, and beat them into powder, and mix the powder with oil, with which oil anoint the loins and privities of the woman with child; it gives her deliverance very ſpeedily, and with leſs pain than can be imagined.

9. Take a ſwallow's neſt, and diſſolve it in water, ſtrain it, and drink it warm; it gives delivery with great ſpeed and much eaſe.

Note this alſo is general, That all things that move the terms are good for making the delivery eaſy; ſuch as myrrh, white amber in white wine, or lily water, two ſcruples or a dram; or caſſia lignea, dittany, each a dram, cinnamon half a dram, ſaffron a ſcruple, give a dram; or take borax mineral a dram, caſſia lignea a ſcruple, ſaffron ſix grains, and give it in ſack; or take caſſia lignea a dram, dittany, amber, of each half a dram, cinnamon, borax, of each a dram and a half, ſaffron a ſcruple, and give her half a dram; or give her ſome drops of oil of hazel in a convenient liquor; or two or three drops, of oil of cinnamon in vervain water. Some prepare the ſecundine thus: Take the naval ſtring and dry it in an oven; take two drams of the powder, cinnamon a dram, ſaffron half a ſcruple, with juice of ſavin make troches: give two drams; or waſh the ſecundine in wine and bake it in a pot; then waſh it in endive water and wine; take half a dram of it; long pepper, galangal, of each half a dram: plantain and endive-ſeed, of each a dram and a half; lavender ſeed four ſcruples; make a powder; or take laudanum two drams, ſtorax, calamine, benzoin, of each half a dram; muſk, ambergreaſe, each ſix grains; make a powder, or troches for a fume. Or uſe peſſaries to provoke the birth; take galbanum, diſſolved in vinegar, an ounce; myrrh two drams; ſaffron a dram; with oil of orts make a peſſary.

An Ointment for the Navel.

Take oil of kier two ounces, juice of ſavin an ounce, of leeks and mercury, each half an ounce; boil them to the conſumption of the juice; and galbanum diſſolved in vinegar half an ounce, myrrh two drams, ſtorax liquid a dram; round birthwort, ſowbread, cinnamon, ſaffron, a dram; with wax make an ointment and apply it.

If the birth be retarded through the weakneſs of the mother, refreſh her with applying wine and ſoap to the noſe, Confect Alkermas, Diamarg.

Theſe things may be applied to help nature in the delivery when the child comes to the birth the right way, and yet the birth is retarded; but if ſhe finds the child comes the wrong way, and ſhe is not able to deliver the woman as ſhe ought to be, by helping nature and ſaving both mother and child (for it is not enough to lay a woman, if it might be done by another with more ſafety and eaſe, and leſs hazard both to woman and child) then let her ſend ſpeedily for better and more able help; and not as I once knew a midwife, when a woman ſhe was to deliver had hard labour, rather than a man-midwife ſhould be ſent for, would undertake to deliver the woman herſelf (though told by others that it was a man's buſineſs) and in her attempting it, brought away

the child, but left the head of the infant behind in the mother's womb; and, had not a man-midwife been presently sent for, the mother had lost her life as well as the child; such persons may rather be termed butchers than midwives. But supposing the woman's labour to be natural, I will next shew what the midwife ought to do in order to her delivery.

CHAP. V.

Of natural Labour; what it is, and what the Midwife is to do in such a Labour.

SECTION I. *What natural Labour is.*

THERE are four things to denominate a woman's labour natural; the first is, that it be at the full time; for if a woman comes before her time it cannot properly be termed natural labour, neither will it be so easy as if she had completed her nine months. The second thing is, that it be speedy and without any ill accident; for when the time of the birth is come, nature is not dilatory in the bringing of it forth, without some ill accident intervene, which renders it unnatural. The third is, that the child be alive; for all will grant, that the being delivered of a dead child is very unnatural. The fourth thing requisite to a natural birth is, that the child come right; for if the position of the child in the womb be contrary to what is natural, and the event proves it so too often, making that which should be a time of life the death both of the mother and the child.

Having thus told you what I mean by natural labour, I shall next shew how the midwife is to proceed here, in order to the woman's delivery. When all the foregoing requisites concur, and after the waters are broke of themselves, let the labouring woman be conducted to a pallet-bed, provided near the fire for that purpose, as has already been said, and let there rather be a quilt laid upon the pallet bedstead than a feather bed, having thereon linen clothes in many folds, with such other things as are necessary, and may be changed according to the exigence requiring it, that so the woman may not be incommoded with the blood, waters, and other filth which is voided in labour. The bed ought to be so ordered, that the woman, being ready to be delivered, should lie on her back upon it, having her body in a convenient posture; that is, her head and breast a little raised, so that she is between lying and sitting, for being so placed, she is best capable of breathing, and likewise will have more strength to bear her pains, than if she lay otherwise, or sunk down in her bed. Being so placed she must spread her thighs abroad, folding her legs a little towards her buttocks, somewhat raised by a small pillow underneath, to the end her rump should have more liberty to retire back; and let her feet be staid against some firm things: Besides this, let her take hold of some of the good women attending her with her hands, that she may the better stay herself during her pains. She being thus placed near the side of her bed, having her midwife by, the better to assist upon occasion, let her take courage, and help her pains the best she can, bearing them down when they take her, which she must do by holding in her breath, and forcing herself as much as possible, in like manner as when she goes to stool; for by such straining, the diaphragma, or midriff, being strongly thrust downwards, necessarily forces down the womb, and the child in it. In the mean time, let the midwife endeavour to comfort her all she can, exhorting her to bear her labour

courageouſly, telling her it will be quickly over, and that there is no fear but ſhe will have a ſpeedy delivery. Let the midwife alſo, having no rings on her hand, anoint it with oil or freſh butter, and therewith dilate gently the inward orifice of the womb, putting her finger-ends into the entry thereof, and then ſtretch them one from the other, when her pains take her; by this means endeavouring to help forward the child, and thruſting, by little and little, the ſides of the orifice towards the hinder part of the child's head, anointing the parts alſo with freſh butter, if it be neceſſary.

When the head of the infant is ſomewhat advanced into this inward orifice, the midwife's phraſe is, It is crowned, becauſe it girds and ſurrounds it juſt as a crown; but when it is ſo far that the extremeties begin to appear without the privy parts, then ſay they, 'The child is in the paſſage;' and at this time the woman feels herſelf as it were ſcratched, or prickled with pins, and is ready to imagine that the midwife hurts her, when it is occaſioned by the violent diſtention of thoſe parts, and the laceration which, at ſome times, the bigneſs of the child's head cauſeth there. When things are in this poſture, let the midwife ſeat herſelf conveniently to receive the child, which will now come quickly, and with her finger-ends (which ſhe muſt be ſure to keep cloſe pared) let her endeavour to thruſt the crowning of the womb (of which I have ſpoken before) back over the head of the child. And as ſoon as it is advanced as far as the ears, or thereabouts, let her take hold of the two ſides with her two hands, that when a good pain comes ſhe may quickly draw forth the child, taking care that the navel ſtring be not then entangled about the neck, or any other part, as ſometimes it is, leſt thereby the after-burden be pulled with violence, and perhaps the womb alſo, to which it is faſtened, and ſo either cauſe her to flood, or elſe break the ſtring, both which are of bad conſequence to the woman, whoſe delivery may thereby be rendered the more difficult. It muſt alſo be carefully heeded that the head be not drawn out ſtraight, but ſhaking it a little from the one ſide to the other, that the ſhoulders may ſooner and eaſier take their place immediately after it be paſt, without looſing any time, leſt the head being paſt, the child be ſtopt there by the largeneſs of the ſhoulders, and ſo come in danger of being ſuffocated and ſtrangled in the paſſage, as it ſometimes happens for the want of care therein. But as ſoon as the head is born, if there be need, ſhe may ſlide in her fingers under the arm pits, and the reſt of the body will follow without difficulty.

As ſoon as the midwife hath in this manner drawn forth the child, let her put it on one ſide, leſt the blood and water which follow immediately, ſhould do it an injury, by running into its mouth and noſe, as it would do if it lay on its back, and ſo endanger the choaking it. The child being thus born, the next thing requiſite is to bring away the after burden; but before that, let the midwife be very careful to examine whether there be more children in the womb, for ſometimes a woman may have twins that expected it not: which the midwife may eaſily know by the continuance of the pains after the child is born, and the bigneſs of the mother's belly. But the midwife may be more ſure of it if ſhe puts her hand up the entry of the womb, and finds there another water gathering, and a child in it preſenting to the paſſage; and if ſhe finds ſo, ſhe muſt have a care of going about to

fetch away the after-birth, till the woman be delivered of all the children ſhe is pregnant with. Wherefore the firſt ſtring muſt be cut, being firſt tied with a thread three or four times doubled and the other end faſtened with a ſtring to the woman's thigh, to prevent the inconvenience it may cauſe by hanging between her thighs; and then removing the child already born, ſhe muſt take care to deliver her of the reſt, whether more or leſs, obſerving all the ſame circumſtances as the firſt; after which it will be neceſſary to fetch away the after-birth or births. But of that in another ſection; after firſt ſhewing what is to be done to the new born infant.

SECTION II. *Of the Cutting off the Child's Navel ſtring.*

THOUGH this is by many accounted but a trifle, yet great care is to be taken about it; and it ſhews none of the leaſt art and ſkill of a midwife to do it as it ſhould be: In doing this the midwife ought to obſerve, 1. The time; 2. the place; 3. the manner; 4. the event.

The time is, as ſoon as ever the infant comes out of the womb, whether it brings part of the after-birth with it or not; for ſometimes the child brings into the world a piece of the amnois upon its head, and is what the good woman calls the caul, and ignorantly attributes ſome extraordinary virtue to the child that is ſo born; but this opinion is only the effect of their ignorance; for when a child is born with ſuch a crown (as ſome call it) upon its brows it generally betokens weakneſs, and denotes a ſhort life. But to the matter in hand. As ſoon as the child is come into the world, conſider whether it be weak or ſtrong: and if it be weak, let the midwife gently put back part of the vital and natural blood into the body of the child by its navel; for that recruits a weak child; but if the child be ſtrong, the operation is needleſs. Only let me adviſe you that many children that are born ſeemingly dead, may ſoon be brought to life again if you ſqueeze ſix or ſeven drops of blood out of that part of the navel ſtring which is cut off, and give it to the child inwardly.

Authors can ſcarce agree whether the navel ſtring ſhould be cut long or ſhort; ſome preſcribing it to be cut off at four finger's breadth, which is at beſt but an uncertain rule, unleſs all fingers were of one ſize. It is a received opinion that the parts adapted to generation are either contracted or dilated according to the cutting of the navel ſtring; and therefore midwifes generally leave a longer part of it to a male than to a female, becauſe they would have the males well provided for the encounters of Venus; and the reaſon they give why they cut that of the females ſhorter, is, becauſe they believe it makes them modeſt, and their privities narrower, which makes them more acceptable to their huſbands. Mizaldus was not of this opinion, and therefore he ordered the navel ſtring to be cut long both in male and female children; becauſe, ſaid he, the inſtrument of generation follows the proportion of it, and therefore, if it be cut too ſhort in a female, it will be a hindrance to her having children. I will not contradict theſe opinions of Mizaldus, that experience has made good. The one is, that if the navel ſtring of a child, after it is cut, be ſuffered to touch the ground, the child will never hold its water, neither ſleeping or waking, but will be ſubject to an involuntary making of water all its lifetime. The other is, that a piece of the child's navel ſtring carried about one, ſo that it touch his ſkin, defends him that wears it from the falling ſickneſs and convulſions.

As to the manner how it muſt be cut: Let the midwife take a brown thread four or five times double, of an ell long, or thereabouts, tied with a ſingle knot at each of the ends, to prevent their entangling; and with this thread ſo accommodated (which the midwife muſt have in readineſs before the woman's labour, as alſo a good pair of ſciſſors, that ſo no time may be loſt) let her tie the ſtring within an inch of the belly with a double knot, and turning about the ends of the thread let her tie two more on the other ſide of the ſtring, reiterating it again, if it be neceſſary; then let her cut off the navel another inch below the ligature, towards the after-birth, ſo that there only remains but two inches of the ſtring, in the midſt of which will be the knot we ſpeak of, which muſt be ſo ſtrait knit as not to ſuffer a drop of blood to ſqueeze out of the veſſels: but care muſt be taken not to knit it ſo ſtrait as to cut it in two, and therefore the thread muſt be pretty thick, and pretty ſtrait knit, it being better too ſtrait than too looſe; for ſome children have miſerably loſt their lives, with all their blood before it was diſcovered, becauſe the navel ſtring was not well tied. Therefore great care muſt be taken that no blood ſqueeze through, for if there does, a new knot muſt be made with the reſt of the ſtring. You need not fear to bind the navel ſtring very hard, becauſe they are void of ſenſe, and that part of it which you leave on falls off of its own accord, in a very few days, ſometimes ſix or ſeven, and ſometimes ſooner; but rarely tarries longer than the eighth or ninth. When you have thus cut the navel ſtring, then take care the piece that falls off touch not the ground, for the reaſon I told you Mizaldus gave, which experience has juſtified.

As to the laſt thing I mentioned, which is the event or conſequence of what follows cutting of the navel ſtring: As ſoon as the navel ſtring is cut off, apply a little cotton or lint to the place to keep it warm, leſt the cold enter into the body of the child, which it will moſt certainly do if you have not bound it hard enough. If the lint or cotton you apply to it be dipt in oil of roſes, it will be the better; and then put another ſmall rag three or four times double upon the belly. Upon the top of all put another ſmall bolſter, and then ſwathe it with a linen ſwathe four fingers broad, to keep it ſteady, leſt by rolling too much, or by being continually ſtirred from ſide to ſide, it comes to fall off before the navel ſtring, which you left remaining, is fallen off. It is the uſual cuſtom of midwifes to put a piece of burnt rag to it, which we commonly call tinder: but I would rather adviſe them to put a little of armoniac to it, becauſe of its drying quality. But this ſhall ſuffice to be ſpoken as to the cutting of the navel ſtring.

SECTION III. *How to bring away the After-burden.*

A WOMAN cannot be ſaid fairly to be delivered though the child be born, till the after-burden be alſo taken from her: herein differing from moſt animals, who, when they have brought forth their young, caſt forth nothing elſe but ſome waters, and the membranes which contained them. But women have an after-labour which ſometimes proves more dangerous than the firſt; and how to bring it ſafely away, without prejudice to her, ſhall be my buſineſs to ſhew in this ſection.

As ſoon as the child is born, before the midwife either ties or cuts the navel ſtring, leſt the womb ſhould cloſe, let her take the ſtring

and wind it once or twice about one or two of the fingers of her left hand joined together, the better to hold it, with which she may draw it moderately, and with the right hand she may only take a single hold of it above the left near the privities, drawing likewise with that very gently, resting the while the fore finger of the same hand, extended and stretched forth along the string towards the entry of the vagina; always observing, for the most facility, to draw it, from the side where the burden cleaves least, for in so doing the rest will separate the better: and especially care must be taken that it be not drawn forth with too much violence, lest by breaking the string near the burden, the midwife will be obliged to put the whole hand into the womb to deliver the woman; and she had need be a very skilful person that undertakes it, lest the womb to which this burden is sometimes very strongly fastened, be not drawn with it, as it has sometimes happened. It is therefore best to use such remedies as may assist nature. And here take notice, that what brings away the birth will also bring away the after birth. And therefore, for the effecting this work, I will lay down the following rules:

1. Use the same means in bringing away the after-birth that you make use of to bring away the birth; for the same care and circumspection is needful now that was then.

2. Consider the labouring woman cannot but be much spent by what she has already undergone in bringing forth the infant; and therefore be sure to take care to give her something to comfort her. And in this case good jelly broths, also a little wine and toast in it, and other comforting things will be necessary.

3. A little white hellebore in powder, to make her sneeze, in this case is very proper.

4. Tansy and the stone Ætites, applied as before directed, is also of good use in this case.

5. If you take the herb vervain, and either boil it in wine or make a syrup with the juice of it, which you may do, by adding to it double its weight of sugar (having clarified the juice before you boil it) and a spoonful or two of that given to the woman is very efficacious to bring away the secundine; and feverfew and mugwort, have the same operation taken as the former.

6. Alexander boiled in wine, and the wine drank; also sweet fervile, sweet cicely, angelica roots, and masterwort, are excellent remedies in this case.

7. Or if these fail, the smoke of marigolds received up a woman's privities by a funnel have been known to bring away the after-birth, even when the midwife let go her hold.

8. Which is all I should add in this case. Boil mugwort in water till it be very soft; then take it out, and apply it in manner of a poultice to the navel of the labouring woman, and it instantly brings away the birth and after-birth: But special care must be taken to remove it as soon as they come away lest, by its long tarrying, it should draw away the womb also. But this much shall suffice to be spoken of in bringing away the after-burden in all natural labours.

SECTION IV. *Of laborious and difficult Labours, and how the midwife is to proceed therein.*

TO proceed in this section the more regularly, it will be necessary to acquaint the reader that there are three sorts of bad labours,

all painful and difficult, but not all properly unnatural. It will be neceſſary therefore to diſtinguiſh theſe.

The firſt of theſe bad labours is that wherein the mother and child ſuffer very much by extreme pain and difficulty, even though the child come right; and this is diſtinguiſhably called laborious labour.

The ſecond is that which is difficult, and differs not much from the former, except that beſides thoſe extraordinary pains, it is generally attended with ſome unhappy accident, which, by retarding the birth, cauſes the difficulty; and theſe difficulties being removed, accelerates the birth, and haſtens the delivery.

Some have aſked what the reaſon is that women bring forth their children with ſo much pain? I anſwer, the ſenſe of feeling is diſtributed to the whole body by the nerves, and the mouth of the womb being ſo ſtrait that it muſt of neceſſity be dilated at the time of the woman's delivery, the dilating thereof ſtretches the nerves, and from thence comes the pain. And therefore the reaſon why ſome women have more pain in their labour than others, proceeds from their having the mouth of the matrix more full of nerves than others, as ſkilful anatomiſts do eaſily diſcover.

But to proceed, the beſt way to remove theſe difficulties that occaſion ſuch hard pains and labour as I am here to treat of, is, to ſhew from whence they proceed for the cauſe of any diſtemper being known, is as much as half the cure. Now the difficulty of labour proceeds either from the mother or child, or both.

From the mother, by reaſon of the indiſpoſition of her body, or may be from ſome particular part only, and chiefly the womb, as when the woman is weak, and the womb is not active to expel its burden, or from weakneſs or diſeaſe, or want of ſpirits; or it may be from ſome ſtrong paſſion of the mind with which ſhe was before poſſeſſed; it may be alſo becauſe ſhe hath been too young, and ſo may have the paſſage too ſtrait; or too old, and then, if it be her firſt child, becauſe her parts are too dry and too hard, and cannot be ſo eaſily dilated, as happens alſo to them who are too lean. Likewiſe thoſe who are either ſmall, or ſhort, or deformed, as crooked women, who have not a breath ſtrong enough to help their pains, and to bear them down; and perſons that are crooked having ſometimes the bones of the paſſage not well ſhaped; the cholic alſo hinders labour, by preventing the true pains, and all great and acute pains, as when the woman is taken with a violent fever, great flooding, frequent convulſions, bloody flux, or any other great diſtemper.

Alſo excrements retained cauſed much difficulty, and ſo does a ſtone in the bladder; or when the bladder is full of urine, without being able to void it; or when the woman is troubled with great and painful biles. It may alſo be from the paſſages, when the membranes are thick, the orifice too ſtrait, and the neck of the womb is not ſufficiently open, the paſſages are preſſed and ſtrained by tumours in the adjacent parts, or when the bones are too firm, and will not open, which very much endangers mother and child; or when the paſſages are not ſlippery, by reaſon of the waters having broke too ſoon, or the membranes being too thin. The womb may alſo be out of order with reſpect to its bad ſituation, or conformation, having its neck too ſtrait, hard or callous; which may eaſily be ſo naturally, or may come by accident, being many times cauſed by a tumour, a poſthume, ulcer, or ſuperfluous fleſh.

As to hard labour occasioned by the child, it is when the child happens to stick to a mole, or when it is so weak that it cannot break the membranes, or if it be too big all over, or in the head only, or if the navel vessels are twisted about its neck, when the belly is hydropical, or when it is monstrous, having two heads, or being joined to another child: also when the child is dead, or so weak that it can contribute nothing to its birth, likewise when it comes wrong, or when there are one or two more, And in all these various difficulties there is oftentimes one more, and that is the ignorance of the midwife; for want of understanding her business hinders nature in her work, instead of helping her.

Having thus looked into the cause of hard labour, I will now shew the industrious midwife how she may minister some relief to the labouring woman under these circumstances. But it will require understanding and judgment in the midwife, when she finds a woman in difficult labour, to know the particular obstruction, or cause thereof, and so a suitable remedy may be applied; as for instance, when it happens by the mother's being too young and too strait, she must be gently treated, and the passages anointed with oil, hogs lard, or fresh butter, to relax and dilate them the easier, lest there should happen a rupture, of any part when the child is born; for sometimes the peritonæum breaks with the skin from the privities to the fundament. But if a woman be in years with her first child, let her lower parts be anointed to molify the inward orifice, which in such a case being more hard and callous, doth not easily yield to the distention of labour, which is the true cause why such women are longer in labour, and also why their children, being forced against the inward orifice of the womb (which as I have said, is a little callous) are born with great humps and bruises on their heads. Those women that are very small and misshapen should not be put to bed, at least till their waters are broke, but rather keep upright, and assisted to walk about the chamber, by being supported under their arms: for by that means they will breathe more freely, and bear their pains better than on the bed, because there they lie all on a heap. As for those that are very lean, and have hard labour, from that cause, let them moisten the parts with oils and ointments, to make them more smooth and slippery, that the head of the infant and the womb be not so compassed and bruised by the hardness of the mother's bones which form the passage. If the cause be weakness, she ought to be strengthened, the better to support her pains; to which end give her good jelly broths, and a little wine with a toast in it. If she fears her pains, let her be comforted, assuring her that she will not bear many more, but be delivered in a little time. But if her pains be slow and small, or none at all, they must be provoked by frequent and pretty strong clysters, that so they may be excited thereby; after which, let her walk about the chamber, that so the weight of the child may help them forward. But if she flood or have convulsions; she must then be helped by a speedy delivery; the operation whereof I shall relate in the section of unnatural labours. If she be costive, let her use clysters, which may also help to dispel the cholic, at those times very injurious, because attended with useless pains, and because such bear not downwards, and so help not to forward the birth. If she finds an obstruction or stoppage on the urine, by reason the womb bears too much on the bladder, let her lift up her belly a little with her hand, and try if by that she receives any benefit; if she finds she does not, it will be necessary to introduce a catheter in the bladder, and thereby draw forth her urine. If the difficulty be from the ill posture of

a woman, let her be placed otherwife, in a poſture more ſuitable and convenient for her; alſo if it proceed from the indiſpoſitions of the womb, as from its oblique ſituation, &c. it muſt be remedied, as well as can be, by the placing of her body accordingly; or if it be a vicious conformation, having the neck too hard, too callous, and too ſtrait, it muſt be anointed with oils and ointments, as before directed. If the membranes be ſo ſtrong as that the waters don't break in due time, they may be broken with the fingers if the midwife be firſt well aſſured that the child come forward into the paſſage, and ready to follow after, or elſe by the breaking of the waters too ſoon, the child may be in danger of remaining dry a long time; to ſupply which defect you may moiſten the parts with fomentations, decoctions, and emollient oils; which yet is not half ſo well as when nature does the work in her own time, with the ordinary ſlime and waters, which do beſt when they come in their own proper time and place. But theſe membranes do ſometimes preſs forth with the waters three or 4 fingers breadth out of the body before the child reſembling a bladder full of water; but there is then no great danger to break them, if they be not already broken, for when the caſe is ſo, the child is always in readineſs to follow, being in the paſſage; but let the midwife be very careful not to pull it with her hand, leſt the after-burden be thereby looſened before its time, for it adheres thereto very ſtrongly. If the navel ſtring happens to come firſt, it muſt preſently be put up again, and kept too, if poſſible, or otherwiſe the woman muſt immediately be delivered. But if the after-burden ſhould come firſt it muſt not be put up again by no means: for the infant having no further occaſion for it it would be but an obſtacle if it were put up; in this caſe it muſt be cut off having tied the navel ſtring, and afterwards drawn forth the child with all the ſpeed that may be, leſt it be ſuffocated.

Section V. *Of Women Labouring with a dead Child.*

WHEN the difficulty of labour ariſes from a dead child, it is a caſe of great danger to the mother, and great care ought to be taken therein; but before any thing be done, the midwife ought to be well aſſured the child is dead indeed, which may be known by theſe ſigns.

1. The breaſt ſuddenly ſlacks, or falls flat, or bags down.
2. A great coldneſs poſſeſſes the belly of the mother, eſpecially about the navel.
3. Her urine is thick, a filthy ſtinking ſettling at the bottom.
4. No motion of the child can be perceived; for the trial whereof, let the midwife put her hand in warm water, and lay it upon her belly; for that, if it be alive, will make it ſtir.
5. She is very ſubject to dream of dead men and be affrighted therewith.
6. She has extravagant longings to eat ſuch things as are againſt nature.
7. Her breath ſtinks though not uſe ſo to do.
8. When ſhe turns herſelf in her bed, or riſes up the child ſways that way like a lump of lead.

But theſe things carefully obſerved, the midwife may make a judgment whether the child be alive or dead; eſpecially if the woman takes the following preſcription:

"Take half a pint of white wine, and burn it, and add thereto half

an ounce of cinnamon, but no other ſpice whatever;" and when ſhe has drank it, if her travailing pains come upon her, the child is certainly dead; but if not, the child may poſſibly be either weak or ſick, but not dead; and in this caſe, it will refreſh the child, and give her eaſe: for cinnamon refreſheth and ſtrengtheneth the child in the womb.

Now, if, upon trial, it be found the child is dead, let the mother do all ſhe can to forward her delivery, becauſe a dead child can be no ways helpful therein. It will be neceſſary therefore that ſhe take ſome comfortable things to prevent her fainting, by reaſon of thoſe putrid vapours aſcending from the dead child. And in order to her delivery, let her take the following herbs boilded in white wine, (or as many of them as you can get) viz. Dittany, betony, pennyroyal, ſage, featherfew, centory, ivy leaves and berries. Let her alſo take ſweet baſil in powder, half a dram at a time, in white wine; and her privities be anointed with the juice of garden tanſy; or, if you take tanſy in the ſummer, when it may be moſt plentifully had, and before it runs up to the flower, and having bruiſed it well, boil it in oil till the juice of it be conſumed. If you ſet it in the ſun, after you have mixed it with oil, it will be more effectual. This a careful midwife ought to have always by her. As to the manner of her delivery, the ſame methods muſt be uſed as are mentioned in the ſection of natural labour. And here I cannot but again commend the ſtone Ætites, held near the privities, whoſe magnetic virtue draws the child any way, with the ſame facility as the loadſtone draws iron.

Let the midwife alſo make a ſtrong decoction of hyſſop with water, and give the woman to drink it very hot, and it will, in a little time, bring away the dead child. A decoction of the herb maſterwort uſed as the above, works the ſame effects. The roots of polipodium ſtamped well, warmed a little, and bound on the ſides of her feet, will ſoon bring away the child either alive or dead.

If, as ſoon as ſhe is delivered of the dead child, you are in doubt part of the after-birth is left behind, for in ſuch caſes, being rotten, it may come away piece meal, let her continue drinking the ſame decoction till her body is cleanſed.

The following medicines ſtir alſo up the expulſive faculty; but in this caſe they muſt be made ſtronger, becauſe the motion of the child ceaſeth.

Take ſavin, round birthwort, troches of myrrh, aſaram roots, cinnamon half an ounce, ſaffron a ſcruple, give a dram with ſavin water. Or, Take borax, ſavin, dittany, each an ounce; myrrh, aſaram roots, cinnamon, ſaffron, each half a dram; make a powder, give a dram.

But ſhe may purge firſt, and put her in an emollient bath, anointing her round about the womb with oil of lilies, ſweet almonds, camomile, hen and gooſe greaſe. Alſo, foment to get out the child with a decoction of mercury, orris, wild cucumbers, ſæchus, broom flowers. Then anoint the privities and loins with ointment of ſowbread, Or,

Take coloquintida, agaric, birthwort, each a dram, make a powder, add armoniac diſſolved in wine, ox gall, each two drams, with oil of kei make an ointment. Or, make a fume with aſſes' hoofs burnt, or galbanum, or caſtor, and let it be taken in with a funnel.

To take away pains and ſtrengthen the parts, foment with the decoction of mugwort, mallows, roſemary, woodmyrtle, St. John's wort, each half an ounce; ſpermaceti two drams, deer's ſuet an ounce, with wax make an ointment. Or, take wax four ounces, ſpermaceti an ounce, melt them, dip flax therein, and lay it all over her belly.

If none of theſe things will do, the laſt remedy is to uſe ſurgery, and then the midwife ought, without delay, to ſend for an expert and able man midwife, to deliver her by manual operation; of which I ſhall treat more at large in the next chapter.

CHAP. VI.

IN ſhewing the duty of a midwife, when the woman's labour is unnatural, it will be requiſite to ſhew in the firſt place, what I mean by unnatural labour; for, it is natural to a woman to bring forth children in pain and ſorrow. That which I call unnatural, is when the child come to the birth in a contrary poſture to that which nature ordained, and in which the generality of children come into the world. Now, as truth is but one, but error dilates itſelf into infinite varity; ſo there is but one proper, right and natural poſture in which children come to the birth; but there are as many wrong and unnatural ways, as there are different poſtures of children when they are come to be born. The right and natural birth is when the child comes with its head firſt, and yet even this is two ſhort a definition of a natural birth; for if any part of the head but the crown comes firſt, ſo that the body follow not in a ſtraight line it is a wrong and difficult birth. Now there are four general ways a child may come wrong; 1ſt, When any of the fore parts of the body firſt preſent themſelves. 2dly, When by an unhappy tranſpoſition, any of the hinder parts firſt preſent themſelves. 3dly, When either of the ſides. Or, 4thly, When the feet preſent themſelves firſt. To theſe four, all the particular and different wrong poſtures that a child can preſent itſelf in for the birth may be reduced; and therefore I ſhall confine myſelf only to treat of theſe four more general wrong ways.

SECTION I. *How to deliver a Woman of a dead Child by unnatural Operation.*

THE laſt ſection of the laſt chapter treated of the delivering of a woman of a dead child, and ſeveral things were directed to be applied in order to facilitate the delivery; but when all theſe fail, a manual operation is abſolutely neceſſary: In order thereto, let the operator acquaint the woman with the abſolute neceſſity there is of ſuch an operation; and that as the child has already loſt its life, there is no other way left for the ſaving of hers: Let him alſo tell her, for her encouragement that he doubts not, with the divine bleſſing, to deliver her ſafely, and that the pains ariſing thereby will not be ſo great as ſhe fears. And then let him endeavour to ſtir up the woman's pains, by giving her ſome ſharp clyſter, to excite her throes to bear down and bring forth the child; and if this prevail not, let him proceed with his manual operation.

Firſt. Let her be placed croſs the bed, that he may operate the eaſier; and let her lie on her back, with her hips a little higher than her head, or at leaſt the body equally placed, when it is neceſſary to put back or turn the infant to give it a better poſture: Being thus ſituated, ſhe muſt fold her legs ſo as her heels be towards her buttocks, and

her thighs ſpread, and held by a couple of ſtrong perſons; there muſt be others alſo to ſupport her under her arms, that the body may not ſlide down when the child is drawn forth, for which ſometimes a great ſtrength is required: let the ſheets and blankets cover her thighs for decency's ſake, and alſo to prevent her catching cold. Then let him anoint the entrance of the womb with oil or freſh butter, if neceſſary, that ſo he may with more eaſe introduce his hand, which muſt alſo be anointed; and having by ſigns before mentioned, received ſatisfaction that it is a dead child, he muſt do his endeavour to fetch it away as ſoon as poſſible; and if the child offers the head firſt, he muſt gently put it back, until he hath liberty to introduce his hand quite into the womb: then ſliding it along under the belly to find the feet let him draw it forth by them, being very careful to keep the head from being locked in the paſſage, that it be not ſeparated from the body; which may be effected the more eaſily, becauſe the child being very rotten and putrified the operator is not ſo mindful to keep the breaſt and face downwards as he is in living births. But if, notwithſtanding all theſe precautions, by reaſon of the child's putrefaction, the head ſhould, be left behind in the womb, it muſt be drawn forth according to the directions which ſhall be given in ſection 3. of this chapter, for that purpoſe. But when the head, coming firſt, is ſo far advanced that it cannot well be put back, it is better to draw it forth ſo, than to torment the woman too much by putting it back to turn it, and bringing it by the feet; but the head being a part round and ſlippery, it may ſo happen that the operator cannot take hold of it with his fingers, by reaſon of its moiſture, nor put them up to the ſide of it, becauſe the paſſage is filled with its bigneſs, he muſt take a proper inſtrument, and put it up as far as he can without violence, between the womb and the child's head, obſerving to keep the point of it towards the head, and let him faſten it there, giving it a good hold upon one of the bones of the ſkull, that it may not ſlide; and after it is well fixed he may therewith draw it forth, keeping the ends of the fingers of his left hand flat upon the oppoſite ſide the better to help to diſengage it, and by ſhaking it a little to conduct it directly out of the paſſage, until the head be quite born, and then taking hold of it with the hands only, the ſhoulders may be drawn into the paſſage, and ſo ſliding the fingers of both hands under the armpits, the child may be quite delivered: and then the after-burden fetched, being careful not to pluck the navel ſtring too hard, leſt it break, as often happens, when it is corrupted.

If the dead child come with the arm up to the ſhoulders ſo extremely ſwelled that the woman muſt ſuffer too great a violence to have it put back, 'tis then the beſt to take it off at the ſhoulder joints, by twiſting three or four times about, which is very eaſily done, by reaſon of the ſoftneſs and tenderneſs of the body: After the arm is ſo ſeparated, and no longer poſſeſſing the paſſage, the operator will have more room to put up his hand into the womb, to fetch the child by the feet and bring it away.

But although the operator beſure the child is dead in the womb, yet he muſt not therefore preſently uſe inſtruments, becauſe they are never to be uſed but when hands are not ſufficient; and there is no other remedy to prevent the woman's danger, or to bring forth the

child any other way: and the judicious operator will chuſe that way which is the leaſt hazardous and moſt ſafe.

SEC. II. *How a Woman muſt be delivered when the Child's Feet come firſt.*

THERE is nothing more obvious to thoſe whoſe buſineſs it is to aſſiſt labouring women, than that the ſeveral unnatural poſtures in which children preſent themſelves at their births are the occaſion of the moſt bad labours and ill accidents that happen unto women in ſuch a condition.

And ſince midwives are very often obliged, becauſe of the unnatural ſituations, to draw the children forth by the feet, I conceive it to be moſt proper to ſhew firſt, how a child muſt be brought forth that preſents itſelf in that poſture, becauſe it will be a guide to ſeveral of the reſt.

I know indeed that in this caſe 'tis the advice of ſeveral authors to change the figure, and place the head ſo, that it may preſent the birth; and this council I ſhould be very inclinable to follow, could they but alſo ſhew how it muſt be done: But it will appear very difficult, if not impoſſible to be performed, if we will avoid the dangers that by ſuch violent agitations both the mother and the child muſt be put into, and therefore my opinion is, That it is better to draw it forth by the feet, when it repreſents itſelf in that poſture, than to venture a worſe accident by turning it.

As ſoon therefore as the waters are broke, and it is known that the child comes thus, and that the womb is open enough to admit the midwife's or operator's hand into it, or elſe by anointing the paſſages with oil or hog's greaſe, to endeavour to dilate by degrees, uſing her fingers to this purpoſe, ſpreading them one from the other, after they are together entered, and continuing to do ſo till it be ſufficiently dilated, then taking care that her nails are well pared, and no rings on her fingers, and her hand well anointed with oil or freſh butter, and the woman placed in the manner directed in the former ſection, let her gently introduce her hand into the entry of the womb, where finding the child's feet, let her draw it forth in the manner I will preſently direct; only let her firſt ſee whether it preſents one foot, or both, and if it be but one foot, ſhe ought to conſider whether it is the right foot or left, and alſo in what faſhion it comes: for by that means ſhe will ſooneſt come to know where to find the other, which as ſoon as ſhe knows and finds, let her gently draw it forth with the other; but of this ſhe muſt be eſpecially careful, viz. that this ſecond be not the foot of another child; for if ſo, it may be of the moſt fatal conſequence, for ſhe may ſooner ſplit both mother and child than draw them forth; but this may be eaſily prevented, if ſhe does but ſlide her hand up the firſt leg and thigh to the twiſt, and there find both thighs joined together, and deſcending from one and the ſame body. And this is alſo the beſt means to find the other foot when it comes with but one.

As ſoon as the midwife has found both the child's feet, ſhe may draw them forth, and holding them together, may bring them by little and little in this manner, taking afterwards hold of the legs and thighs as ſoon as ſhe can come at them, drawing them ſo till the hips be come forth. Whilſt this is doing, let her obſerve to wrap the parts in a ſingle cloth that ſo her hands being already greaſy, ſlide not on

the infant's body, which is ſlippery, becauſe of the viſcious humours which are all over it, and prevent one's taking good hold of it, which being done, ſhe may take hold under the hips, ſo to draw it forth to the beginning of the breaſt; and let her on both ſides with her hand bring down the arms along the child's body, which ſhe may then eaſily find; and then let her take care that the belly and face of the child be downwards, for if it ſhould be upwards, there would be ſome danger of its being ſtopt by the chin over the ſhare bone; and therefore, if it be not ſo, muſt turn it to that poſture; which may be eaſily done if ſhe take hold on the body when the breaſt and arms are forth in the manner we have ſaid, and draws it with turning it in proportion on that ſide which it moſt inclines to, till it be turned with the face downwards, and ſo having brought it to the ſhoulders, let her loſe no time, deſire the woman at the ſametime to bear down, that ſo at drawing, the head at that inſtant, may take its place, and not to be ſtopt in the paſſage. Some children there are whoſe heads are ſo big, that when the whole body is born, yet that ſtops in the paſſage, though the midwife takes all poſſible care to prevent it. And when this happens ſhe muſt not endeavour only to draw forth the child by the ſhoulders, leſt ſhe ſometimes ſeparate the body from the head, as I have known it done by the midwife, but ſhe muſt diſcharge it by little and little from the bones in the paſſages with the fingers of each hand, ſliding them on each ſide oppoſite the one to the other, ſometimes above and ſometimes under, until the work be ended, endeavouring to diſpatch it as ſoon as poſſible, leſt the child be ſuffocated, as it will unavoidably be, if it ſhould remain long in that poſture: and this being well and carefully effected, ſhe may ſoon after fetch away the after-birth, as I have before directed.

SECTION III. *How to bring away the Head of the Child when ſeparated from the body, and left behind in the Womb.*

THO' the utmoſt care be taken in bringing away the child by the feet, yet if the child happens to be dead, it is ſometimes ſo putrefied and corrupted, that with the leaſt pull the body ſeparates from the head, and remains alone in the womb, and cannot be brought away but with a manual operation and difficulty. It being extremely ſlippery, by reaſon of the place where it is, and from the roundneſs of its figure, on which no hold can be well taken: And ſo very great is the difficulty in this caſe, that ſometimes two or three able practitioners in the art of midwifery, have one after the other left the operation unfiniſhed, as not able to effect it, after the utmoſt efforts of their induſtry, ſkill and ſtrength: ſo that the woman not being able to be delivered, periſheth. To prevent which fatal accidents for the time to come, let the following operation be obſerved.

When the infant's head ſeparate from the body, and is left behind, whether through putrefaction, or otherwiſe, let the operator immediately, whilſt the womb is yet open, direct up his right hand to the mouth, for no other hold can there be had; and having found it let him put one or two of his fingers into it, and his thumb under the chin, and then let him draw it by little and little, holding it ſo by the jaw; but if that fails, as ſometimes it will, when putrified, then let him pull forth his right hand, and ſlide up his left, with which he muſt ſupport the head, and with the right let him take a harrow in-

ſtrument called a crotchet; but let it be ſtrong and with ſingle branch which he muſt guide along the inſide of his hand, with the point of it towards it, for fear of hurting the womb, and having thus introduced it, let him turn it towards the head, for to ſtrike either into an eye hole, or the hole of an ear, or behind the head, or elſe between the ſtature as he finds it moſt convenient and eaſy: and then draw forth the head ſo faſtened with the ſaid inſtrument, ſtill helping to conduct it with his left hand; but when he hath brought it near the paſſage, being ſtrongly faſtened to the inſtrument, let him remember to draw forth his hand, that the paſſage not being filled with it may be the larger and eaſier, keeping ſtill a finger or two on the ſide of the head; the better to diſengage it.

There is alſo another way to this, with more eaſe and leſs hardſhip than the former; which is this, let the operator take a ſoft linen or fillet ſlip of above four fingers breadth, and the length of three quarters of an ell or thereabouts, taking the two ends with the left hand, and the middle with the right, and let them ſo put it up with his right as that it may be beyond the head, to embrace it as a ſling doth a ſtone; and afterwards draw forth the fillet by the two ends together, it will be eaſily drawn forth, the fillet not hindering the leaſt paſſage, becauſe it takes up little or no place.

When the head is thus fetched out of the womb, care muſt be taken that not the leaſt part of it be left behind, and likewiſe to cleanſe the woman well of her after-burden, if yet remaining. Some have queſtioned whether the child's head remaining yet in the womb, or the after-birth ought to be brought away firſt? The anſwer to which queſtion may be by way of diſtinction; that is to ſay, if the burden be wholly ſeparated from the ſides of the womb, that ought to be firſt brought away, becauſe it may alſo hinder the taking hold of the head; but if it ſtill adheres to the womb, it muſt not be meddled with till the head be brought away; for if one ſhould then go about to ſeparate it from the womb, it might then cauſe a flooding which would be augmented by the violence of the operation; the veſſels to which it is joining remaining for the moſt part open as long as the womb is diſtended, which the head cauſeth while it is retained in it, and cannot cloſe till this ſtrange body be voided, and then it doth by contraction and compreſſing itſelf together, as has been more fully before explained. Beſides the after-birth remaining thus cleaving to the womb during the operation prevents it from receiving eaſily either bruiſe or hurt.

SECTION IV. *How to deliver a Woman when the ſide of the Child's Head is preſented to the Birth.*

THOUGH ſome may think it a natural labour when the child's head may come firſt, but yet if the child's head preſents not the right way, even that is an unnatural labour, and therefore though the head comes firſt, yet if it be the ſide of the head inſtead of the crown, it is very dangerous both to the mother and child, for the child may ſooner break its neck than be born in that manner; and by how much the mother's pains continue to bear the child, which it is impoſſible, unleſs the head be rightly placed, the more the paſſages are ſtopt; therefore as ſoon as the poſition of the child is known, the woman muſt be laid with all ſpeed, leſt the child ſhould advance further in this vicious poſture, and therefore render

it more difficult to thruſt it back, which muſt be done in order to place the head in the paſſage right as it ought to be.

To this purpoſe therefore place the woman ſo that her hips may be a little higher than her head and ſhoulders, cauſing her to lean a little upon the oppoſite ſide to the child's ill poſture; then let the operator ſlide up his hand, well anointed with oil, by the ſide of the child's head, to bring it right, gently with his fingers between the head and the womb; but if the head be ſo engaged that it cannot be done that way, he muſt then put up his hand to the ſhoulders, that ſo by thruſting them back a little into the womb, ſometimes on the one ſide and ſometimes on the other; he may by little and little give it a natural poſition. I confeſs it would be better if the operator could put back the child by its ſhoulders with both his hands; but the head takes up ſo much room, that he will find much ado to put up one, with which he muſt perform his operation, with the help of the finger ends of the other hand, put forwards the child's birth, as when the labour is natural.

Some children preſent their face firſt, having their heads turned back, in which poſture it is extremely difficult that a child ſhould be born; and if it continue ſo long, the face will be ſwelled, and withal black and blue, that it will at firſt ſeem monſtrous, which is occaſioned as well by the compreſſion of it in that place, as by the midwife's fingers handling it too readily, in order to place it in a better poſture. But this blackneſs will wear away in three or four days time, anointing it often with the oil of ſweet almonds. To deliver the birth, the ſame operation muſt be uſed as in the former, when a child comes with the ſide of the head; only let the midwife or operator work very gently to avoid as much as poſſible the bruiſing of the face.

SECTION V. *How to deliver a Woman when a Child preſents one or both Hands together with the Head.*

SOMETIMES the infant will preſent ſome other part together with its head, which if it does, it is uſually one or both its hands, and this hinders the birth, becauſe the hands take up part of that paſſage which is little enough for the head alone; beſides, that when this happens, they generally cauſe the head to lean on one ſide; and therefore this poſition may be very well ſtiled unnatural. When the child preſents thus, the firſt thing to be done, after it is perceived, muſt be to prevent it from coming down more, or engaging further in the paſſage, and therefore the operator, having placed the woman on the bed a little lower than her hips, muſt put and guide back the infant's hand with his own as much as may be, or both of them, if they both come down, to give way to the child's head; and this being done, if the head be on one ſide, it muſt be brought into its natural poſture in the middle of the paſſage, that it may come in a ſtrait line, and then proceed as directed in the foregoing ſection.

SECTION VI. *How a Woman is to be delivered when the Hands or feet of the Infant come together.*

THERE is none but will readily grant, that when the hands and feet of an infant preſent together, the labour muſt be unnatural, becauſe it is impoſſible a child ſhould be born in that manner. In this therefore, when the midwife guides her hand towards the orifice of the womb, ſhe will perceive only many fingers cloſe together; and if it be not ſufficiently dilated, it will be a good while before the hands and feet will be exactly diſtinguiſhed; for they are ſometimes ſo ſhut and preſſed together, that

they seem to be all of one and the same shape; but where the womb is open enough to introduce the hand into it, she will easily know which are the hands and which are the feet; and having well taken notice thereof, let her slide her hand, and presently direct it towards the infant's breast, which she will find very near, and then let her very gently thrust back the body towards the bottom of the womb, leaving the feet in the same place where she found them; and then having placed the woman in a convenient posture, that is, to say her hips a little raised above her breast and head (which situation ought always to be observed when the child is to be put back into the womb) let the midwife afterwards take hold of the child by the feet, and draw it forth, as is directed in the second section.

This labour, though somewhat troublesome, yet is much better than when the child presents only its hands; for the child must be quite turned about before it can be drawn forth; but in this, they are ready, presenting themselves, and in this there is not so much to do, but to lift and thrust back a little the upper part of the body, which is almost done of itself by drawing it along by the feet.

I confess there are many authors that have written of labours, who would have all wrong births reduced to a natural figure; which is to turn it, that it may come with the head first; but those that have thus written are such as never understood the practical part; for if they had the least experience herein, they would know that it is very often impossible, at least if it were to be done, that violence must necessarily be used in doing it, that would very probably be the death of mother and child in the operation. I would therefore lay down as a general rule, that whensoever an infant presents itself wrong to the birth, in what posture soever from the shoulders to the feet, it is the best way, and soonest done, to draw it out by the feet: and that it is better searching for them if they do not present themselves, rather than try to put it in the natural posture, and place the head foremost; for the great endeavours necessary to be used in turning the infant in the womb do so much weaken both mother and child, that there remains not afterwards strength enough to commit the operation to the work of nature for usually the woman hath no more throes or pains fit for labour, after she has been so wrought upon; for which reason it would be very difficult and tedious at best: and the child, by such an operation, made very weak, would be in extreme danger of perishing before it could be born. It is therefore much better in these cases to bring it away immediately by the feet, searching for them, as I have already directed, when they do not present themselves: by which the mother will be prevented of a tedious labour, and the child be often brought alive into the world, who otherwise would hardly escape death. And thus much shall suffice to be said of unnatural labours: for by the rule already given, a skilful artist will know how to proceed in any posture in which the child presents itself.

SECTION VII. *How a Woman shall be delivered that has Twins which present themselves in different postures.*

WE have already spoken something of the birth of twins in the chapter of unnatural labour; for it is not an unnatural labour barely to have twins, provided they come in a right position to the birth. But when they shall present themselves in divers postures, they come properly under the denomination of unnatural labours; and if when one child presents itself in a wrong figure, it makes it much more so when there are several, and renders it not only more painful to the mother and children, but to the operator also, for they often trouble each other, and hinder both

their births, beſides which, the womb is then ſo filled with them, that the operator can hardly introduce his hand without much violence, which he muſt do, if they be to be turned to thruſt back, to give them a better poſition.

When a woman is pregnant with two children, they rarely preſent to the birth together, the one being generally more forward than the other, and that is the reaſon that but one is felt; that many times the midwife knows not that there are twins till the firſt is born, and that ſhe is going to fetch away the after-birth. In the 5th chapter, wherein I treated of natural labour, I ſhewed how a woman ſhould be delivered of twins, preſenting themſelves both right: and therefore, before I cloſe this chapter of unnatural labour, it only remains that I ſhew what ought to be done, when they either both come wrong, or one of them only, as for the moſt part it happens; the firſt generally coming right, and the ſecond with the feet forward, or in ſome worſe poſture. In ſuch a caſe, the birth of the firſt muſt be haſtened as much as poſſible to make way for the ſecond, which is beſt brought away by the feet, without endeavouring to place it right, even though it was ſomewhat inclining towards it, becauſe it has been already tired and weakened by the birth of the firſt as well as its mother, that there would be greater danger of its death than likelihood of its coming out of the womb that way.

But if, when the firſt is born naturally, the ſecond ſhould likewiſe offer its head to the birth, it would be then beſt leaving nature to finiſh what ſhe has ſo well begun; and if nature ſhould be too ſlow in her work, ſome of thoſe things mentioned in the forth chapter to accelerate the birth may be properly enough applied; and if, after that, the ſecond birth ſhould be yet delayed, let a manual operation be deferred no longer: but the woman being properly placed, as has been before directed, let the operator direct his hand gently into the womb to find the feet, and ſo draw forth the ſecond child, which will be the more eaſily effected, becauſe there is way made ſufficient by the birth of the firſt; and if the waters of the ſecond child be not broke, as it often happens, yet intending to bring it by the feet, he need not ſcruple to break the membranes with his fingers: for though when the birth of a child is left to the operation of nature, it is neceſſary that the waters ſhould break of themſelves; yet when the child is brought out of the womb by art, there is no danger in breaking of them; nay, on the contrary, it becomes neceſſary; for without the waters are broke it would be almoſt impoſſible to turn the child.

But herein principally lies the care of the operator that he is not deceived, when either the hands or the feet of both children offer themſelves together to the birth; in this caſe he ought well to conſider the operation, as whether they be not joined together, or any way monſtrous; and which part belongs to one child and which to the other, that ſo they may be fetched one after the other, and not both together, as might be, if it were not duly conſidered, taking the right foot of the one and the left of the other, and ſo drawing them together, as if they belonged to one body, becauſe there is a left and a right, by which means it would be impoſſible ever to deliver them; But a ſkilful operator will eaſily prevent this, if having found two or three feet of ſeveral children preſenting together in a paſſage, and taking aſide two of the forwardeſt, a right and a left, and ſliding his hands along the legs and thighs up to the twiſt, if forwards, or the buttocks, if backwards, he finds they both belong to one body; of which being thus

aſſured, he may begin to draw forth the neareſt, without regarding which is ſtrongeſt or weakeſt. bigger or leſs, living or dead, having put firſt a little aſide that part of the other child which offers to have the more way, and ſo diſpatch the firſt, wherever it is, as ſoon as may be, obſerving the ſame rules, as if there were but one, that is, keeping the breaſt and face downwards, with every circumſtance directed in that ſection where the child comes with its feet firſt: And not fetch the burthen till the ſecond child is born. And therefore when the operator hath drawn forth one child, he muſt ſeparate it from the burden, having tied and cut the navel ſtring, and then fetch the other by the feet in the ſame manner, and afterwards, bring away the after-burden with the two ſtrings, as have been before ſhewed. If the children preſent any other part than the feet, the operator may follow the ſame method as is directed in the foregoing ſection, where the ſeveral unnatural poſitions are carefully treated of.

CHAP. VIII.

Directions for Child-bearing Women in their lying-in.

IN the fourth, fifth, and ſixth chapters, we have treated at large of women's labour, and how they may be ſafely delivered both in natural and unnatural labours, Having therefore thus brought the good woman to bed, I will in this chapter direct how ſhe ought to be ordered in her lying-in.

SECTION I. *How a Woman newly delivered ought to be ordered.*

AS ſoon as ſhe is laid in bed, let her be placed in it conveniently for eaſe and reſt, which ſhe ſtands in great need of, to recover herſelf of the great fatigue ſhe underwent during her travail; and, that ſhe may lie the more eaſily, let her head and body be a little raiſed, that ſhe may breathe more freely, and cleanſe the better, eſpecially of that blood which then comes away, that ſo it may not clot, which being retained cauſeth very great pain.

Having thus placed her in bed, let her drink a draught of burnt white wine, when you have firſt melted therein a dram of ſpermaceti. The herb vervain is alſo a moſt ſingular herb for a woman in this condition, boiling it in what ſhe either eats or drinks, fortifying the womb ſo exceedingly, that it will do it more good in two days, having no offenſive taſte, tho' very pleaſant virtues. And this is no more than what ſhe ſtands in need of, for her lower parts being ſo greatly diſtended to the birth of the infant, it is good to endeavour the prevention of an inflamation there. Let therefore be outwardly applied all over the bottom of the belly and privities the following anodyne or cataplaſm. Take two ounces of oil of ſweet almonds, and two or three new laid eggs, yolks and whites, ſtirring them together in an earthern pipkin over the hot embers, till it comes to the conſiſtence of a poultice; which being ſpread upon a cloth, muſt be applied to thoſe parts indifferently warm, having firſt taken away the cloſures (which were put to her preſently after her delivery) and likewiſe ſuch clots of blood as were then left. Let this lie on five or ſix hours, and then renew it again as you ſee cauſe.

Great care ought to be taken at firſt, that if her body be very weak, ſhe be not kept too hot, for extremity of heat weakens nature and diſſolves the ſtrength; and whether ſhe be weak or ſtrong, be ſure that no cold air comes near her at firſt; for cold is an enemy to the ſpermatic parts, and if it gets into the womb, it increaſes the after-pains, cauſes ſwellings in the womb, and hurts the nerves. As to her diet, let it be hot, and let

her eat but a little at a time. Let her avoid the light for three or four days, and longer if she be weak, for her labour weakens her eyes exceedingly, by a harmony between the womb and them. Let her avoid great noises, sadness and troubles of mind.

If the womb be foul, which may be easily perceived by the impurity of the blood (which will then either come away in clots or stinking, or if you suspect any of the after-burden to be left behind, which may sometimes happen) make her drink of featherfew, mugwort, pennyroyal, and mother of thyme, boiled in white wine, sweetened with sugar.

Panada and new laid eggs is the best meat for her at first, of which she may eat often, but not too much at a time. And let her use cinnamon in all her meat and drink, for it is a great strengthener to the womb.

Let her stir as little as may be till after the fifth, sixth, or seventh days of her delivery, if she be weak. And let her talk as little as may be, for that weakens her.

If she goes not well to stool, give a clyster made only with the decoction of mallows and a little brown sugar.

When she hath lain-in a week or more, let her use such things as close the womb, of which not grass and comfrey are very good: and to them you may add a little polypodium, for it will do her good, both leaves and roots being bruised.

SECT. II. *How to remedy those Accidents which a lying-in Woman is subject to.*

I. THE first common and usual accident that troubles women in their lying-in, is after-pains; the cause whereof some affirm to be one thing, some another; but it is most certain that they proceed from cold and wind contained in the bowels with which they are filled after labour, because when they have more room to dilate, than when the child was in the womb, by which they were compressed, and also because the nourishment and matter contained in them and the stomach, has been confusedly agitated from side to side during the pains of labour, and could not be well digested, whence this wind is afterwards generated, and by consequence, the gripes which the woman feels running into her belly from side to side, according as the wind moves, and sometimes from the womb, because of the compression and commotion which the bowels make. These being generally the cause, let us now apply a suitable remedy.

2. Boil an egg soft, and pour out the yolk of it, with which mix a spoonful of cinnamon water and let her drink it; and if you mix in it two grains of ambergrease it will be the better; and yet vervain taken in any thing she drinks, will be as effectual as the other.

3. Give the lying-in woman, immediately after delivery, oil of sweet almonds and syrup of maidenhair mixed together; some prefer oil of walnuts, provided it be made of nuts that are very good, but it tastes worse than the other. This will lenify the inside of the intestines by its unctuousness, and by that means bring away that which is contained in them more easily.

4. Take and boil onions very well in water, then stamp them with oil and cinnamon and seed in powder and spread them upon a cloth, and apply them to the region of the womb.

5. Let her be careful to keep her belly very hot, and not to drink what is too cold: and if they prove very violent, hot cloths, from time to time, must be laid to her belly, or a pancake fried in walnut oil may be applied to it without swathing her belly so strait; and, for the better evacuating

the wind out of the inteſtines, give her a clyſter, repeating it as often as neceſſity requires.

6. Take bayberries, beat them to powder, put the powder, upon a chaffing diſh of coals, and let her receive the ſmoke of them up her privities.

7. Take tar and barrows greaſe, of each an equal quantity, boil them together, and, whilſt it is boiling, add a little pigeon's dung to it. Spread ſome of this upon a linen cloth, and apply it to the reins of her back, and it will give her ſpeedy eaſe.

Laſtly let her take half a dram of bayberries beaten into a powder in a draught of muſtard or tent.

II. Another accident to which women in child-bed are ſubject, is the hemorrhoides, or piles, occaſioned through their ſtraining in bringing the child into the world. To cure this,

1. Let her be let blood in the vein ſaphæna.

2. Let her uſe polypodium in her meat and drink, bruiſed and boiled.

3. Take an onion, and having made a hole in the middle of it, fill it full of oil, toaſt it, and having bruiſed it all together, apply it to the fundament.

4. Take as many woodlice as you can get, and bruiſe them, and having mixed them with a little oil, apply them warm as before.

5. If ſhe go well to ſtool, let her take an ounce of caſſia fiſtula drawn at night going to bed; ſhe need no change of diet after.

III. Retention of the menſtrues is another accident happening to women in child-bed; and, which is of ſo dangerous conſequence, that, if not timely remedied it proves mortal. Where this happens,

1. Let the woman take ſuch medicines as ſtrongly provoke the terms, ſuch as dittany, betony, pennyroyal, ſavory, featherfew, centaury, juniper berries, piony roots.

2. Let her take two or three ſpoonfuls of briony water each morning.

3. Gentian roots beaten into a powder, and a dram of it taken every morning in wine is an extraordinary remedy.

4. The root of birthwort, either long or round, ſo uſed and taken as the former, is very good.

5. Take twelve piony ſeeds, and beat them into very fine powder, and let her drink them in a draught of hot carduus poſſet, and let her ſweat after. And if this laſt medicine don't bring them down the firſt time ſhe taſtes it, let her take as much more thee hours after, and it ſeldom fails.

IV. Overflowing of the menſes is another accident incidental to child-bed women.

1. Take ſhepherds' purſe, either boiled in any convenient liquor, or dried and beaten into powder, and it will be an admirable remedy to ſtop them, this being eſpecially appropriated to the privities.

2. The flowers and leaves of brambles, or either of them, being dried and beaten into powder, and a dram of them taken every morning in a ſpoonful of red wine, or in the decoction of the leaves of the ſame (which perhaps is much better;) is an admirable remedy for the immoderate flowing of the terms in women.

V. Excoriations bruiſes and rents of the lower part of the womb, are often occaſioned by the violent diſtention and ſeparation of the four caruncles in a woman's labour. For the healing whereof,

As ſoon as the woman is laid, if there be only ſimple contuſions and excoriations, let the anodyne cataplaſm, formerly directed, be applied

to the lower parts to eaſe the pain, made of the yolks and whites of new laid eggs, and oil of roſes boiled a little over warm embers, continually ſtirring it till it be equally mixed, and then ſpread upon a fine cloth, it muſt be applied very warm to the bearing place for five or ſix hours, and when it is taken away, lay ſome fine rags, dipped in oil of St. John's wort twice or thrice a day, alſo ſome foment the parts with barley-water and honey of roſes to cleanſe them from the excrements which paſs. When the woman makes water, let them be defended with fine rags, any thereby hinder the urine from cauſing ſmart and pain.

VI. The curdling and clotting of the milk is another accident that often happens to women in child bed; for, in the beginning of child bed the woman's milk is not purified, becauſe of thoſe great commotions her body ſuffered during her labour, which affected all the parts, and it is then mixed with many other humours. Now this clotting of milk does, for the moſt part, proceed from the breaſts not being fully down, and that either becauſe ſhe hath too much milk, and that the infant is too ſmall and weak to ſuck all, or becauſe ſhe doth not deſire to be a nurſe, for the milk in thoſe caſes remaining in the breaſt after concoction without being drawn, looſeth the ſweetneſs and the balſamic quality it had, and, by reaſon of the heat it acquires and the too long ſtay it makes there, it ſours, curdles, and clots as we ſee runnet put into ordinary milk turns it into curds. This curdling of the milk may be alſo cauſed by having taken a great cold, and not keeping the breaſts well covered.

But from what cauſes ſoever this curdling of the milk proceeds, the moſt certain remedy is, ſpeedily to draw the breaſts until they are emitted and dried. But in regard the infant, by reaſon of its weakneſs cannot draw ſtrong enough, it will be proper to get another woman to draw her breaſts until the milk come freely, and then ſhe may give her child ſuck. And that ſhe may not afterwards be troubled with a ſurpluſage of milk, ſhe muſt eat ſuch diet as give but little nouriſhment, and keep her body open.

But if the caſe be ſuch that the woman neither can nor will be a nurſe, it is then neceſſary to empty the body by bleeding in the arm; beſides drawing down the humours, by ſtrong clyſters and bleeding in the foot, nor will it be amiſs to purge gently; and to digeſt diſſolve and diſſipate the curdled milk, apply the cataplaſm of pure honey, or uſe the following liniment.

A Liniment to ſcatter and diſſipate the milk.

That the milk flowing back to the breaſts may without offence be diſſipated, uſe this ointment: "Take pure wax two ounces, lintſeed oil half a pound; when the wax is melted, let the liniment be made, wherein linen cloths muſt be dipped, and laid upon the breaſt; and when it ſhall be diſcuſſed, and pains no more, let other linen cloths be dipped in the diſtilled water of acrons, and put upon them."

Note. That the cloths dipped in the diſtilled water of acorns, muſt be uſed only by thoſe who cannot nurſe their own children; but if a ſwelling in the breaſts of thoſe who give ſuck, ariſes from abundance of milk, and threatens an inflamation, uſe the former ointments, but abſtain from uſing the diſtilled water of acorns.

CHAP. VIII.

Directions for Nurses in ordering new-born Children.

HAVING in the former chapter shewn how the lying-in woman should be ordered, it is now high time to take care of the infant to whom the first service that should be performed for it, is the cutting of the navel string, of which I have spoken at large before.

SECTION I. *What is to be done to the new-born Infant after cutting the Navel string.*

WHEN the child's navel string has been cut, according to the rules before prescribed, let the midwife presently cleanse it from the excrements and filth it brings into the world with it; of which some are within the body, as the urine in the bladder, and the excrement found in the guts; and others without, which are thick, whitish and clammy, proceeding from the sliminess of the waters: There are children sometimes so covered over with this, that one would say they are rubbed over with soft cheese and some women are of so easy a belief, that really think it so, because they had eaten some while they were with child. From these excrements let the child be cleansed with wine and water a little warmed, washing every part therewith but chiefly the head, because of the hair, also the folds of the groins, armpits, and the cods or privities; which parts must be gently cleansed with a linen rag, or a soft spunge dipped in this lukewarm wine. If this clammy or viscious excrement stick so close that it will not be easily washed off from those places, it may be fetched off with the oil of sweet almonds, or a little fresh butter melted with wine, and afterwards well dried off. She must also make tents of fine rags, and, wetting them in this liquor, clear the ears aud nostrils; but for the eyes, wipe them only with a dry soft rag, not dipping it in the wine, lest it should make them smart.

The child being thus washed and cleansed from its native blood and impurities which attended it into the world, it must, in the next place be searched to see whether all things be right about it, and that there is no fault or dislocation; whether its nose be straight, or its tongue tied, whether there be any bruise or tumour on the head, or whether the mould be not overshotten; also whether the scrotum, if a boy, be not blown up and swelled; and in short, whether it has suffered any violence in any part of its body, and whether all the parts be well and duly shaped, that suitable remedies may be applied, if any thing be found not right. Nor is it enough that all be right without, and the outside of the body cleansed, but she must chiefly observe whether it dischargeth the excrements retained within, and whether the passage be open, for some have been born without having them perforated; therefore let her examine whether the conduits of the urine and stool be clear, for want of which some have died, not being able to void their excrements, because timely care was not taken at first. As to the urine, all children, males and females, do make water as soon as they are born, if they can, especially when they feel the heat of the fire, and sometimes also the excrements, but not so soon as the urine. If the infant does not ordure the first day, then put up into its fundament a small suppository, to stir it up to be discharged, that it may not cause painful gripes by remaining so long in its belly. A sugar

almond may be proper for this purpoſe anointed over with a little boiled honey, or elſe a ſmall piece of caſtile ſoap rubbed over with freſh butter; ſhe may alſo give the child, to this purpoſe, a little ſyrup of roſes or violets at the mouth, mixed with ſome oil of ſweet almonds drawn without a fire, anointing the belly alſo with the ſame oil or a little freſh butter.

The midwife having thus waſhed and cleanſed the child, according to the before mentioned directions, let her begin to ſwaddle in ſwathing clothes, and when ſhe dreſſes the head, let her put ſmall rags behind the ears to dry up the filth which uſually engenders there, and alſo in the folds of the armpits and groins, and ſo ſwathe it, having wrapped it up warm in bed and blankets; only take care that they ſwathe not the child too ſtrait, eſpecially about the breaſt and ſtomach, that it may breathe the more freely, and not be forced to vomit up the milk it ſucks, becauſe the ſtomach cannot be ſufficiently extended to contain it; therefore let its arms and legs be wrapped in its bed ſtretched and ſtraight, and ſwathed to keep them ſo, viz. the arms along its ſides, and its legs equally both together, with a little of the bed between them, that they may not be galled by rubbing each other; let the head be kept ſteady and ſtraight, with a ſtay faſtened on each ſide the blanket, and then wrap the child up in mantles and blankets to keep it warm. This ſwathing of the infant is very neceſſary, to give its body a ſtraight figure which is moſt decent and proper for a man, and to accuſtom him to keep upon his feet, and not walk upon all-four, as moſt other animals do.

CHAP. IX.

NEW-BORN children are ſubject to ſo many diſtempers that daily experience ſhews us, there and not above half the children that are born who live till they are three years old; which is occaſioned by the tenderneſs of their bodies and feebleneſs of their age, which hinders them from expreſſing the incommodities they labour under, any otherwiſe than by their cries. The buſineſs of this chapter therefore will be to diſcover the indiſpoſitions to which they are ſubject, with the remedies proper for them.

SECTION I. *Of Gripes and Pains in the Bellies of young Children.*

THIS I mention firſt, as it is often the firſt and moſt common diſtemper which happens to little infants after their birth, many children being ſo troubled and pained therewith, that they cry night and day, and at laſt die of it. This comes, for the moſt part, from the ſudden change of their nouriſhment, for having always received it from the umbilical veſſels whilſt in their mother's womb, they come to change, on a ſudden, not only the manner of receiving it, but the nature and quality of what they receive, as ſoon as they are born: for inſtead of purified blood only, conveyed to them by means of the umbilical vein, they are now obliged to be nouriſhed with their mother's breaſt milk, which they ſuck with their mouths, and from which are engendered many excrements, cauſing gripes and pains, and that not only becauſe it is not ſo pure as the blood with which it was nouriſhed in the womb, but becauſe the ſtomach and inteſtines cannot yet make a good digeſtion. It is alſo cauſed ſometimes by a tough phlegm, and ſometimes by the worms; for phyſicians affirm, that worms have been bred in children even in their mother's belly.

The remedy therefore muſt be ſuited to the cauſe; if it proceed from the too ſudden changes of nouriſhment, the remedy muſt be to forbear giving the child ſuck for ſome days, leſt the milk be mixed with phlegm; and at firſt it muſt ſuck but little, until it be accuſtomed to digeſt it. If it be the excrements in the inteſtines, which by their long ſtay increaſe theſe pains, give them at the mouth a little oil of ſweet almonds, and ſyrup of roſes. If it be worms lay a cloth dipped in oil of wormwood, mixed with ox-gall, upon the belly; for a ſmall cataplaſm, the powder of rue, wormwood, coloquintida, aloes, the ſeeds of citron, incorporated with ox-gall, and the powder of lupines. Or, give it oil of ſweet almonds, with ſugar candy, and a ſcruple of anniſeed; it purges new-born babes from green choler and ſtinking phlegm, and if it be given with ſugar-pap it allays the griping pains of the belly. Alſo anoint the belly with oil of dill, or pellitory ſtamped with oil of camomile, to the belly.

SECTION II. *Of weakneſs in new-born infants.*

WEAKNESS is an accident that many children bring into the world along with them, and is often occaſioned by the labour of the mother: by the violence and length whereof they ſuffer ſo much, that they are born with great weakneſs, and many times it is difficult to know whether they are alive or dead, their body appearing ſo ſenſeleſs, and their face ſo blue and livid, that they ſeem to be quite choaked; and, even after ſome hours, their ſhewing ſigns or life is attended with ſo much weakneſs, that it looks like a return from death, and that they are ſtill upon the borders of that kingdom.

In this caſe, the beſt way to help the infant is to lay him ſpeedily in a warm bed and blankets, and carry him to the fire, and then let the midwife ſup a little wine, and ſpout it into his mouth, repeating it often, if there be occaſion. Let her apply linen to the breaſt and belly dipped in wine, and then let the face be uncovered that he may breathe the more freely; alſo let the midwife keep its mouth a little open, cleanſe the noſtrils with ſmall linen tents dipped in white wine, that ſo he may receive the ſmell of it and let her chafe every part of his body well with warm cloths, to bring back the blood and ſpirits, which being retired inward through weakneſs often puts him in danger of being choaked. By the application of theſe means the infant will inſenſibly recover ſtrength, and begin to ſtir his limbs by degrees, and at length to cry, which though it be but weakly at firſt, yet afterwards as he breathes more freely, he will cry ſtronger and ſtronger.

SECTION III. *Of the Fundament being cloſed up in a new-born infant.*

ANOTHER effect that new-born infants are liable to, is to have their fundaments cloſed up, by means whereof they can neither evacuate the new excrements engendered by the milk they ſuck, nor that which was amaſſed in their inteſtines whilſt in their mother's belly, which is certainly mortal without a ſpeedy remedy. There have been ſome female children who have had their fundament quite cloſed, and yet have voided the excrements of the guts by an orifice, which nature, to ſupply that defect, had made within the neck of the womb.

For the cure or remedy of this, we muſt notice that the fundament is cloſe two ways; either by a ſingle ſkin, through which one may diſcover ſome black and blue marks, proceeding from the excrements retained, which of one touch with the finger, there is a ſoftneſs felt within, and thereabouts it ought to be pierced; or elſe it is quite ſtop-

ped by a thick fleſhy ſubſtance, in ſuch ſort that there appears nothing without by which its true ſituation may be known. When there is nothing but the ſingle ſkin which makes the cloſure, the operation is very eaſy, and the child may do very well: for then an apertion or opening may be made with a ſmall inciſion knife, croſs ways, that it may the better receive a round form, and that the place afterwards may not grow together, taking great care not to prejudice the ſphincter or muſcle of the Rectum. The inciſion being thus made, the excrements will certainly have iſſue. But if, by reaſon of their long ſtay in the belly, they are become ſo dry that the infant cannot void them, then let a ſmall clyſter be given to moiſten and bring them away; afterwards put a linen tent into the new-made fundament, which at firſt had beſt be anointed with honey of roſes, and towards the end with a drying cicatrizing ointment, ſuch as Unguentum, Album, or Pomphelix, obſerving to cleanſe the infant of his excrements, and dry it again as ſoon and as often as he evacuates them, that ſo the apertion may be prevented from turning into a malignant ulcer.

But now if the fundament be ſtopped up in ſuch a manner, that neither mark nor appearance can be either ſeen or felt, then the operation is ſo much more difficult; and even when it is done, the danger is much more of the infant's eſcaping it. And then if it be a female, and that it ſends forth its excrements by the way I have mentioned before, it is better not to meddle, than by endeavouring to remedy an inconvenience, to run an extreme hazard of the infant's death. But when there is no vent for the excrements, without which death is unavoidable, there the operation is juſtifiable.

The operation in this caſe muſt be thus; let the operator with a ſmall inciſion knife that hath but one edge, enter into the void place, and turning the back of it upwards within half a finger's breadth of the child's rump, which is the place where he will certainly find the inteſtine, let him thruſt it forward, that it may be open enough to give free vent to the matters there contained, being eſpecially careful of the ſphincter; after which, let the wound be dreſſed according to the method directed.

SECTION IV. *Of the Thruſh, or Ulcers in the Mouth of an Infant.*

THE thruſh is a diſtemper that children are very often ſubject to, and it ariſes from bad milk, or from foul humours in the ſtomach; for ſometimes, though there be no ill quality in the milk itſelf, yet it may corrupt in the child's ſtomach becauſe of its weakneſs, or ſome other indiſpotion, in which, acquiring an acrimony inſtead of being well digeſted, there ariſes from thence biting vapours, which forming a thick viſcoſity, do thereby produce this diſtemper.

It is often difficult, as phyſicians tell us, becauſe it is ſeated in hot and moiſt places, where the putrefaction is eaſily augmented, and for that the remedies applied cannot lodge there, being ſoon waſhed away by ſpittle. But if they ariſe from too hot a quality in the nurſe's milk, care muſt be taken to temper and cool, preſcribing her cool diet, bleeding and purging her alſo, if there be occaſion.

Take lentiles huſked, powder them and lay it upon the child's gums; or take melidium in flower, half an ounce, and with oil of roſes make a liniment. Alſo waſh the child's mouth with barley and plantain water, and honey of roſes, or ſyrup of dry roſes, mixing them with a little verjuice, or juice of lemons as well to looſen and cleanſe

the vicious humours which cleave to the inside of the child's mouth, as to cool those parts which are already over-heated. This may be done by means of a small fine rag fastened to the end of a little stick, and dipped therein, wherewith the ulcers may be gently rubbed, being careful not to put the child to too much pain, lest an inflamation make the distemper worse. The child's body must be also kept open, that the humours being carried to the lower parts, the vapours may not ascend, as it is usual for them to do, when the body is costive, and the excrements too long retained. If the ulcers appear malignant, let such remedies be used as do their work speedily, that the evil qualities that cause them being thereby instantly corrected, their malignity may be prevented; and in this case touch the ulcers with plantain waters sharpened with the spirits of vitrol, for the remedy must be made sharp according to the malignity of the distemper. It will not be unnecessary to purge these ill humours out of the whole habit of the child, by giving half an ounce of succory with rhubarb.

SECTION V. *Of Pain in the Ears, Inflamation, Moisture, &c.*

THE brain in infants is very moist, and hath many excrements which nature cannot send out at its proper passages; they get often to the ears, and there cause pains, flux of blood, with inflamation, and matter with pain: and in children is hard to be known, having no other way to make it known but by constant crying; you will also perceive them ready to fell their ears themselves, but will not let others touch them if they could help it: and sometimes you may discern the parts about the ears to be very red. These pains, if let alone, are of dangerous consequences, because they bring forth watching and epilepsy, for the moisture breeds worms there, and fouls the spongy bones, and by degrees incurable deafness.

To prevent all those ill consequences, allay the pain with all convenient speed, but have a care of using strong remedies. Therefore only use warm milk about the ears, with the decoction of poppy tops, or oil of violets: to take away the moisture, use honey of roses, and let aquamellis be dropped into the ears; or take virgin honey half an ounce, red wine two ounces, allum, saffron, saltpetre, each a dram; mix them at the fire; or drop in hempseed oil with a little wine.

SECTION VI. *Of Redness and Inflamation of the Buttocks, Groin, and Thighs of an Infant.*

IF there be not great care taken to change and wash the child's beds as soon as they are fouled with the excrements, and to keep the child very clean, their acrimony will be sure to cause redness, and beget a smarting in the buttocks, groin and thighs of the child, which by reason of the pain, will afterwards be subject to inflamations, which follow the sooner, through the delicacy and tenderness of their skin, from which the outward skin of the body is in a short time separated and worn away.

The remedy of this is twofold; that is to say, first, to keep the child cleanly, and in the second place, to take off the sharpness of its urine. As to keeping it cleanly, she must be a sorry nurse that needs to be taught how to do it, for if she lets it but have dry, clean and warm beds and clouts, as often and soon as it has fouled and wet them, either by its urine or excrements, it will be sufficient; and, as to the second, the taking off the sharpness of the child's urine, that must be done by the nurse's keeping a cooling diet, that her milk may have the

ſame quality ; and therefore ſhe ought to abſtain from all things that may heat it. But beſides theſe cooling and drying remedies are requiſite to be applied to the inflamed parts ; therefore, let the parts be bathed with plantain water, with a fourth of lime water added to it, each time the child's excrements are wiped off ; and if the pain be very great, let it only be fomented with lukewarm milk. The powder of a poſt to dry it, or a little mill duſt ſtrewed upon the parts affected, may be proper enough : and it is uſed by ſeveral women. Alſo Ungentum Album, or Diapampholigos, ſpread upon a ſmall piece of leather in form of a plaiſter, will not be amiſs.

But the chief thing muſt be the nurſes taking great care to wrap the inflamed parts with fine rags when ſhe opens the child, that thoſe parts may not be gathered and painted by rubbing them together.

SECTION VII. *Of Vomiting in young Children.*

VOMITING in children proceeds ſometimes from too much milk, and ſometimes from bad milk, and is often from a moiſt looſe ſtomach ; for as dryneſs retains, ſo looſeneſs lets go. This is for the moſt part, without danger in children ; and they that vomit from their birth are the luſtieſt ; for the ſtomach not being uſed to meat, and milk being taken too much, crudities are eaſily bred, or the milk is corrupted ; and it is better to vomit theſe up than to keep them in ; but if vomiting laſt long, it will cauſe an atrophy or conſumption for want of nouriſhment.

To remedy this, if from too much milk, that which is emitted is yellow and green, or otherwiſe ill coloured and ſtinking ; in this caſe, mend the milk, as has been ſhewed before ; cleanſe the child with honey of roſes, and ſtrengthen its ſtomach with ſyrup of milk and quinces made into an electuary. If the humour be hot and ſharp, give the ſyrup of pomegranates, currants and coral ; and apply to the belly the plaiſter of bread, the ſtomach create, or bread dipped in hot wine ; or take oil of maſtic, quinces, mint, wormwood, each half an ounce ; of nutmegs by expreſſion, half a dram, chymical oil of mint, three drops. Coral hath an occult property to prevent vomiting, and is therefore hung about their necks.

SECTION VIII. *Of breeding Teeth in young Children.*

THIS is a very great, and yet neceſſary evil in all children, having variety of ſymptoms joined with it ; they begin to come forth, not all at a time, but one after another, about the ſixth and ſeventh month ; the fore teeth coming firſt, then the eye teeth, and at laſt of all the grinders : the eye teeth cauſe more pain to the child than any of the reſt, becauſe they have a very deep root, and a ſmall nerve, which hath communication to that which makes the eye move. In the breeding of their teeth, firſt they feel an itching in their gums, when they are pierced as with a needle, and pricked by the ſharp bones, whence proceed great pains, watching, and inflamation of the gums, fever, looſneſs, and convulſions, eſpecially when they breed their eye teeth.

The ſigns when children breed their teeth, are theſe ; 1. It is known by their time, which is uſually about the ſeventh month. 2. Their gums are ſwelled, and they feel a great heat there, with an itching, which makes them put their fingers in their mouth to rub them, from whence a moiſture diſtils down into the mouth, becauſe of the pain they feel there. 3. They hold the nipple faſter than before. 4. The

gum is white where the tooth begins to come; and the nurse in giving them suck finds the mouth hotter, and that they are much changed, crying every moment, and cannot sleep, or but very little at a time. The fever that follows breeding of teeth comes from cholerick humours, inflamed by watching, pain, and heat. And the longer teeth are breeding, the more dangerous it is, so that many in the breeding of them die of fevers and convulsions.

For remedy, two things are to be regarded; one is, to preserve the child from the evil accidents that may happen to it by reason of the great pain; the other, to assist as much as may be the cutting of the teeth, when they can hardly cut the gums themselves.

For the first of these, *i. e.* the preventing these accidents to the child, the nurse ought to take great care to keep a good diet, and to use all things that may cool and temper her milk, that so a fever may not follow the pain of the teeth. And to prevent the humour from falling too much upon the inflamed gums, let the child's belly be kept always loose by gentle clysters, if it be bound; though oftentimes there is no need of them, because they are at those times usually troubled with a loosness, and yet for all that, clysters may not be improper neither.

As to the other, which is to assist in cutting of the teeth, that the nurse must do from time to time molifying and loosening them, by rubbing them with her finger dipped in butter or honey, to let the child have a virgin wax candle to chew upon; or anoint the gums with the mucilage of quince made with mallow water, or with the brains of a hare; also foment the cheeks with the decoction of Althea, and cammomile flower and dill, or with the juice of mallows and fresh butter. If the gums are inflamed, add juice of nightshade and lettuce. I have already said the nurse ought to keep a temperate diet. I will now add, that barley broth, water gruel, raw eggs, prunes, lettuce and endive, are good for her: but let her avoid salt, sharp, biting, and peppered meats, and wine.

Section IX. *Of the Flux of the Belly, or looseness in Infants.*

IT is very common for infants to have the flux of the belly, or looseness, especially upon the least indisposition; nor is it to be wondered at, seeing their natural moistness contributes so much thereto: and if it be not extraordinary violent, such are in a better state of health than those that are bound. This flux, if violent proceeds from divers causes: as, 1. From breeding teeth, and is then commonly attended with a fever, in which the concoction is hindered and the nourishment corrupted. 2. From watching. 3. From pain. 4. From stirring of the humours by a fever. 5. When they suck or drink too much in a fever. Sometimes they have a flux without breeding of teeth, from outward cold in the guts or stomach, that obstructs concoction. If it be from teeth it is easily known, for the signs in breeding of teeth will discover it. If it be from external cold, there are signs of other causes. If from a humour flowing from the head, there are signs of a catarrh, and the excrements are frothy. If crude and raw humours are voided, there is wind, belching, and phlegmatic excrements. If they be yellow, green and stink, the flux is from a hot and sharp humour. It is best in breeding of teeth when the belly is loose, as I have said before; but if it be too violent, and you are afraid it may end in a consumption, it must be stopped; and if the excrements that are voided be black, attended with a fever, it is very bad.

The remedy in this cafe has a principal refpect to the nurfe, and the condition of the milk, muft chiefly be obferved; the nurfe muft be cautioned that fhe eat no green fruit, nor things of a hard concoction. If the child fuck not, remove the flux with purges, fuch as leave a blooding quality behind them: As fyrup of honey, of rofes, or a clyfter. Take the decoction of millium, myrobolans, each two or three ounces, with an ounce or two of fyrup of rofes, and make a clyfter. After cleanfing, if it proceed from a hot caufe, give fyrup of dried rofes, quinces, myrtles, coral, maftic, hart's-horn, red rofes, or powder of myrtles, with a little Sanguis Draconis. Alfo anoint with oil of rofes, myrtles, maftic, each two drams, with oil of myrtles and wax, make an ointment. Or, take red rofes, moulin, each a handful, cypreſs roots, two drams: make a bag, boil it in red wine and apply it to the belly. Or, ufe the plaifter of bread or ftomach ointment. If the caufe be cold, and the excrements white, give fyrup of maftic, and the quinces, with mint water. Ufe outwardly mint, maftic, cummin; or, take rofe feeds an ounce, cummin and annis feed, each two drams; with oil of maftic, wormwood, and wax, make an ointment.

SECTION X. *Of the Epilepfy and Convulfions in Children.*

THIS is a diftemper that is the death of many young children, and proceeds from the brain firft, as when the humours are bred in the brain that caufe it, either from the parents, or from vapours, or bad humours that twitch the membrances of the brain; it is alfo fometimes caufed from other diftempers, and from bad diet; likewife the toothach, when the brain confents, caufes it, and fo does a fudden fright. As to the diftemper itfelf, it is manifeft, and well enough known where it is; and as to the caufe whence it comes, you may know by the figns of the difeafe whether it comes from bad milk, or worms, or teeth: if thefe are all abfent, it is certain that the brain is firft affected; if it comes with the fmall pox, or meafles, it ceafeth when they come forth if nature be ftrong enough.

For the remedy of this grievous and often mortal diftemper, give the following powder to prevent it, to a child as foon as it is born: Take male piony roots, gathered in the decreafe of the moon, a fcruple, with leaf gold make a powder; or, take piony roots a dram, piony feeds, miſletoe of the oak, elk's hoof, man's fkull, amber, each a fcruple, muſk two grains; make a powder. The beft part of the cure is taking care of the nurfe's diet, which muft not be diforderly by any means. If it be from corrupt milk, provoke a vomit, to do which, hold down the tongue, and put a quill dipped in fweet almonds down the throat. If it comes from worms give fuch things as will kill the worms. If there be a fever refpect that alfo, and give coral fmaraged, and elk's hoof. In the fit give epileptic water, as lavender water, and rub with oil of amber, or hang a piony root, elk's hoof, and fmaraged coral, about the neck.

As to a convulfion, it is when the brain labours to caft out that which troubles it: the matter is in the marrow of the back, and fountain of the nerves; it is a ſtubborn diſeaſe and often kills.

For the remedy whereof, in the fit waſh the body, eſpecially the back bone, with Decoction of Althæa, lily roots, piony and camomile flowers, and anoint it with man's and goofe greafe, oils of worms, orris lillies, turpentine, maftic, ſtorax and calamint. The ſun flower is alſo very good, boiled in water, to waſh the child.

THE

Experienced Midwife.

PART II.

Containing proper and safe Remedies for the curing of all those distempers that are peculiar to the Female Sex, and especially those that have Obstruction to the Bearing of Children.

HAVING finished the first part of this book, and I hope therein amply made good my promise to the reader. I am now come to treat of the distempers peculiar to the female sex: in which it is not my design to enlarge, or to treat of all the distempers they are incident to, but those only to which they are most subject, when in a breeding condition, and that keep them from being so: for each of which distempers I have laid down such proper and safe remedies, as, with the divine blessing, may be sufficient to repel them; and since as amongst all the diseases to which human nature is subject, there is none that more diametrically oppposes the very end of our creation, and the design of nature in the formation of different sexes, and the power thereby given us for the work of generation, than that of sterility or barrenness, which, where it prevails, renders the most accomplished midwife, but an useless person, and destroys the design of our book; I think therefore barrenness is an effect that deserves our first consideration.

CHAP. I.

Of Barrenness; its several kinds, with proper Remedies against it; and the Signs of Insufficiency both in Men and Women.

SECTION I. *Of Barrenness in general.*

AS there is no general rule but will admit of some exception, against this second part; for though I have promised to treat herein only of diseases peculiar to the female sex, yet this chapter will engage me to speak of a defect in men, barrenness being an effect incident to them also; and therefore it is necessary to be handled with respect to men as well as women, that without treating of it so, I shall not be able to make good the old proverb, of setting the saddle on the right horse.

Having premised this, and thereby anticipated an objection, I shall now proceed to the subject of this chapter, which is barrenness.

Barrenness is either natural or accidental.

Natural barrenness is, when a woman is barren, though the instruments of generation are perfect both in herself and husband, and no preposterous or diabolical course used to cause it; and neither age nor disease, or any natural defect hindering, and yet the woman remains naturally barren, and conceives not.

Now this may proceed from a natural cause: for if the man and woman be of one complexion, they seldom have children; and the reason is clear, for the universal course of nature being formed by the Almighty of a composition of contraries, cannot be increased by a composition of likes; and therefore, if the constitution of the woman

be hot and dry as well as of the man, there can be no conception; and if, on the contrary, the man should be of a cold and moist constitution as well as the woman, the effect would be the same; and this barrenness is purely natural. The only way to help it is for people before they marry to observe each others constitution and complexion, if they design to have children. If their complexions and constitutions be alike, they are not fit to come together, for the discordant nature makes the only harmony in the work of generation.

Another natural cause of barrenness is want of love between the man and wife. Love is that vital principle that ought to inspire each origin in the act of generation, or else 'twill be but spiritless and dull; for if their hearts be not united in love, how should their seed unite to cause conception; and this is evidently evinced in that there never follows conception on a rape; therefore if men and women design to have children, let them live so that their hearts as well as their bodies may be united, or else they may miss of their expectations.

A third cause of natural barrenness is virgins letting blood in the arm before their natural courses are come down, which is usually in the fourteenth or fifteenth years of their age; sometimes perhaps before the thirteenth but never before the twelfth. And because usually they are out of order and indisposed before their purgations come down, their parents run to the doctor to know what is the matter, and he straight way opens a vein in the arm, as if it was fullness of blood which was the cause of offending, and this makes her well at present; and when the young virgin happens to be in the same disorder again, the mother straight runs to the surgeon, and he directly uses the same remedy: and by these means the blood is diverted from its proper channel, that it comes not down the womb as in another woman; and so the womb dries up, and the woman is forever barren. The way to prevent this is to let no virgin blood in the arm before her courses comes down well; but if there be occasion, let her blood in the foot: for that will bring the blood downwards, and by that means provoke the menstrues to come down.

Another cause of natural barrenness is the debility in copulation; if persons perform not that act with all the heat and ardour that nature requires, they may as well let it alone, and expect to have children without it, for frigidity and coldness never produce conception. Of the cure of this we will speak by and by, after I have spoken of accidental barrenness, which is what is occasioned by some morbific matter or infirmity upon the body, either of the man or the woman, which being removed, they become fruitful. And since [as I have before noted] the first and great law of the creation was to increase and multiply, and barrenness is the direct opposition to the law, and frustrates the end of our creation; and that it is a great affliction to divers to be without children, and often causes man and wife to have hard thoughts of one another, each party thinking the cause not in them. I shall here for the satisfaction of well meaning people, set down the signs and causes of insufficiency both in men and women, premising this first, that when people have no children, they must not presently blame either party, for neither may be in fault, but perhaps God sees it not good [for reasons best known unto himself] to give them any; of which we have divers instances in history.—And though the Almighty in the production of nature, works by natural means,

yet where he withholds his bleſſing, natural means are ineffectual: for it is the bleſſing which is the power and energy by which nature brings forth her productions.

SECTION II. *Signs and cauſes of Inſufficiency in Men.*

ONE cauſe may be in ſome viciouſneſs in the yard, as if the ſame be crooked, or any ligaments thereof diſtorted or broken, whereby the ways and paſſages through which the ſeed ſhould flow, come to be ſtopped or vitiated.

Another cauſe may be too much weakneſs of the yard, and tenderneſs thereof, ſo that it is not ſtrongly enough erected to inject ſeed into the womb; for the ſtrength and ſtiffneſs of the yard very much conduce to conception, by reaſon of the forcible injection of the ſeed.

Alſo if the ſtones have received any hurt, ſo that they cannot exerciſe the proper gift in producing ſeed, or if they be oppreſſed with any inflamation or tumour, wound or ulcer, or draw up within the belly, and not appearing outwardly theſe are ſigns of inſufficiency and cauſes of barrenneſs.

Alſo a man may be barren by reaſon of the defect of ſeed; as firſt if he caſt forth no ſeed at all, or leſs in ſubſtance than is needful. Or, ſecondly if the ſeed be vicious, or unfit for generation, as on the one ſide, it happens in bodies that are groſs and fat, the matter of it being defective, and on the other ſide too much leanneſs, or continual waſting of conſumption of body deſtroys the ſeed; nature turning all the matter and ſubſtance thereof into nutriment of the body.

Too frequent copulation is alſo one great cauſe of barrenneſs in men; for it attracteth the ſeminal moiſture from the ſtones before it is ſufficiently prepared and concocted; ſo, if any one by daily copulation do exhauſt and draw out all the moiſture of the ſeed, then do the ſtones draw the moiſt humours from the ſuperior veins into themſelves; and ſo having but a little blood in them, they are forced of neceſſity to caſt it out raw and unconcocted, and thus the ſtones are violently deprived of the moiſture of their veins, and the ſuperior veins from all the other parts of the body for their proper nouriſhment, thereby depriving the body of its vital ſpirits. And therefore no wonder that thoſe that uſe immoderate copulation are very weak in their bodies; ſeeing their whole body is thereby deprived of their beſt and pureſt blood, and of the ſpirit, inſomuch that many who have been too much addicted to that pleaſure, have killed themſelves in the very act, and therefore it is no wonder if ſuch unconcocted and ungeſted ſeed be unfit for generaton.

Gluttony, drunkenneſs, and the other exceſſes, do alſo much hinder men from fruitfulneſs, and makes them unfit for generation.

But among other cauſes of barrenneſs in men, this alſo is one that makes them barren, and almoſt of the nature of eunuchs, and that is the inciſion, or the cutting of ther veins behind their ears, which in caſe of diſtempers is oftentimes done; for according to the opinion of moſt phyſicians and anatomiſts, the ſeed flows from the brain by thoſe veins behind the ears more than from any other part of the body. From whence it is very probable, that the tranſmiſſion of the ſeed is hindered by the cutting of the veins behind the ears, ſo that it cannot deſcend at all to the teſticles, or come thither very crude and raw. And thus much for the ſigns and cauſes of barrenneſs in men.

SEC. III. *Signs and Cauſes of Inſufficiency, or Barrenneſs in Women.*

ALTHOUGH there are many cauſes of the barrenneſs of women, yet the chief and principal are internal, reſpecting either the privy parts, the womb, or menſtruous blood.

Therefore Hippocrates ſaith (ſpeaking of either eaſy or difficult conception of women) the firſt conſideration is to be had of their ſpecies, for little women are more apt to conceive than great; ſlender than groſs; white and fair, than ruddy and high coloured; black than wane; thoſe that have their veins conſpicuous are more apt to conceive than others; but to the very fleſh is evil; to have great ſwelled breaſts is good.

The next thing to be conſidered, is the monthly purgations, whether they have been duly every month, and whether they flow plentifully, and are of good colour, and whether they have been equal every month.

Then the womb or place of conception is to be conſidered, it ought to be clean, ſound, dry and ſoft: not retracted or drawn up; not prone, not deſcending downwards, nor the mouth thereof turned awry, not too cloſe ſhut. But to ſpeak more particularly:

The firſt parts to be ſpoken of are the pudenda, or privities, and the womb; which parts are ſhut and incloſed, either by nature or againſt nature; and from hence ſuch women are called imperſores; and in ſome women the mouth of their womb continues compreſſed, or cloſed up from the time of their birth, until the coming down of their courſes, and then on a ſudden when their terms preſs forward to purgation, they are moleſted with great and unuſual pains; ſome of theſe break of their own accord, others are diſſected and opened by phyſicians, others never break at all, and it brings death.

And all theſe Aetius particularly handles, ſhewing that the womb is ſhut three manner of ways, which hinders conception. And the firſt is, when the lips of the pudenda grows or cleave together; the ſecond is, when there are certain membranes growing in the middle part of the matrix within; the third is, when (though the lips and boſom of the pudenda may appear fair and open) the mouth of the womb may be quite ſhut up; all which are occaſions of barrenneſs, in that they hinder both the uſe of man, the monthly courſes, and conception.

But among all the cauſes of barrenneſs in women, the greateſt is in the womb, which is the field of generation; and if this field be corrupt, it is in vain to expect any fruit, let it be ever ſo well ſown; for it may be unfit for generation, by reaſon of many diſtempers to which it is ſubject: as for inſtance over-much heat and over-much cold: for women, whoſe wombs are too thick and cold, cannot conceive becauſe cold extinguiſhes the heat of the human ſeed. Immoderate moiſture of the womb alſo deſtroys the ſeed of man, and makes it ineffectual, as corn ſown in ponds and marſhes; and ſo does over much dryneſs in the womb, ſo the ſeed periſheth for want of nutriment. Immoderate heat of the womb is alſo a cauſe of barrenneſs, for it ſcorcheth up the ſeed, as corn ſown in the drought of ſummer; for immoderate heat hurts all the parts of the body, ſo as no conception can live in the woman. And when unnatural labours are engendered, as too much phlegm, tympanies, wind, water, worms, or any ſuch evil humours abounding con-

trary to nature, it causes barrenness; as does all the terms not coming down in due order, as I have already said.

A woman may also have other accidental causes of barrenness (at least such as may hinder her conception) as sudden frights, anger, grief and perturbation of the mind: too violent exercises, as leaping, dancing, running after copulation, and the like. But I will now add some signs by which these things may the known.

If the cause of barrenness be in the man through over-much heat in his seed, the woman may easily feel that in receiving it.

If the nature of the womb be too hot, and so unfit for conception, it will appear by her having her terms very little, and the colour inclining to yellowness; she is also very hasty, choleric, and crafty, her pulse beats very swift, and she is very desirous of copulation.

If you would know whether the defect is in the man or the woman, sprinkle the man's urine upon a lettice-leaf, and the woman's upon another, and that which dries away first is unfruitful. Also, Take five wheaten corns and seven beans, put them into an earthen pot, and let the party make water therein, if these begin to sprout, after standing seven days, then the party is fruitful, if not, they are barren, whether it be man or woman. This is a certain sign.

Some make this experiment of a woman's fruitfulness: They take myrrh, red storax, and some odoriferous things and make a perfume, which the woman is to receive into the neck of the womb through a funnel: and if the woman feels the smoke ascend through her body to the nose, then she is fruitful, otherwise not. Some also take garlic and beat it, and cause the woman to lie on her back upon it, and if she feel the scent thereof to her nose, it is a sign of fruitfulness.

Culpepper and others also give a great deal of credit to the following experiment.

Take a handful of barley, and steep half of it in the urine of the man, and the other half in the urine of the woman, for the space of twenty four hours, and then take it out, and set the man's by itself, and the woman's by itself, in a flower pot, or some other thing; water the man's every morning with his own urine, and the woman's with hers, and that which grows first, is the most fruitful; and if one grow not at all, that party is naturally barren.

But, now, having spoken enough of the disease, it is high time to assign the cure.

If barrenness proceeds from stoppage of the menses, let the woman sweat, for that opens the parts; and the best way to sweat is in a hot-house. Then let the womb be strengthened by drinking a draught of white wine, wherein a handful of stinking arrack, first bruised, has been boiled. For by a secret magnetic virtue it strengthens the womb, and by a sympathetic quality removes any disease thereof. To which add also a handful of vervain, which is very good to strengthen both the womb and head, which are commonly afflicted together by sympathy. Having used these two or three days, if they come not down; take of calac, mint, pennyroyal, thyme, betony, dittany, feverfew, burnet, mugwort, sage, piony roots, juniper berries, half a handful of each, or so many as can be got, let all these be boiled in beer, and drank for her ordinary drink.

Take one part of the gentian root, two parts of centory, distil them with ale in an alembic, after you have bruised the gentian roots, and

infused them well. This water is an admirable remedy to provoke the terms. But if you have not this water in readiness, take a dram of centory, and half a dram of gentian roots bruised, boiled in posset drink, and drink a draught of it at night going to bed. Seed of wild navew beaten to powder, and a dram of it taken in the morning in white wine, also is very good; but if it do not do, you must be let blood in the legs. And be sure you administer your medicines a little before the full of the moon, or between a new and full moon, by no means in the wane of the moon; if you do, you will find them ineffectual.

If barrenness proceeds from the overflowing of the menstrues, then strengthen the womb, as you were taught, and afterwards anoint the reins of the back with oil of roses, oil of myrtle, oil of quinces, every night, and then wrap a piece of white baize about your reins, the cotton side next the skin, and keep the same always to it. But above all, I recommend this medicine to you. Take comfrey leaves or roots, and blown woundwort, of each a handful: bruise them well, and boil them in ale, and drink a good draught of it now and then: Or, Take cinnamon, cassia lignea, opium, of each two drams; myrrh, white pepper galbanum of each one dram: dissolve the gum and opium in white wine and beat the rest into powder; then make it into pills, by mixing them together exactly, and let the patient take two pills every night going to bed, but let not the pills exceed 15 grains.

If barrenness proceed from a flux of the womb, the cure must be according to the cause producing it, which may be known by its signs: for a flux of the womb being a continual distillation from it for a long time together, the colour of what is voided shews what humour it is that offends: In some it is red, and that proceeds from blood putrefied: in some it is yellow, and that denotes choler; in others white and pale, and that denotes phlegm. If pure blood comes out, as if a vein were opened, some corrosion or gnawing of the womb is to be feared. All those are known by these signs:

The place of conception is continually moist with the humours, the face is ill coloured, the party loaths meat, and breathes with difficulty, the eyes are much swollen, which is sometimes without pain. If the offending humour be pure blood, then you must let blood in the arm, and the cephalic vein is fittest to draw back the blood, and then let juice of plantain and comfrey be injected into the womb. If phlegm, be the cause, let cinnamon be used in all her meats and drinks, and let her take a little Venice treacle or mithridate every morning. Let her boil burnet, mugwort, featherfew and vervain, in all her broths. Also, half a dram of myrrh taken every morning, is an excellent remedy against this malady. If choler be the cause, let her take burrage, buglos, and roses, endive, and succory roots, lettuce, and white poppy seed, each an handful; boil these in white wine till one half be wasted; let her drink half a pint every morning, to which add syrup of peach flowers, and syrup of chichony, of each an ounce, with a little rhubarb, and this will gently purge her. If it proceeds from putrefied blood, let her be blooded in the foot, and then strengthen the womb as I have directed in stopping of the menses.

If barrenness be occasioned by the falling out of the womb, as sometimes happens, let her apply sweet scents to her nose, such as civit, galbum, storax, calamitis, wood of aloes and other things of that nature; and let her lay stinking things to the womb, such as assafœtida, oil of amber, or of the smoke of her own hair burnt; for this is a certain truth, that the womb

flies from all ſtinking, and cleaves to all ſweet things. But the moſt infallible cure in this, Take a common burdock leaf (which you may keep dry all the year) apply this to her head, and it will draw the womb upwards. In fits of the mother, apply it to the ſoles of her feet, and it will draw the womb downwards. Burſeed beaten into powder draws the womb which way you pleaſe according as it is applied.

If barrenneſs proceed from a hot cauſe, let the party take whey, and clarify it: then boil plantain leaves and roots in it, and drink it for her ordinary drink. Let her alſo inject the juice of plantain into the womb with a ſyringe: if it be in winter, when you cannot get the juice, make a ſtrong decoction of the leaves and roots in water, and inject thatt up with a ſyringe; but let it be but blood warm, and you will find this medicine of great efficacy. And further, Take often conſerve of roſes, cold lozenges made of tragacanth, the confections of traiſantali, frequently ſmell camphire, roſe water and ſaunders. It is alſo good to bleed the baſilica, or liver vein, and take four or five ounces of blood, and then uſe this purge. Take electuarum de epithimo, de ſucco roſarum, of each two drams and a half, clarified whey four ounces: mix them well together, and take it in the morning faſting; ſleep after it about an hour and a half, and faſt four hours after it. And, about an hour before you eat any thing, drink a good draught of whey: Alſo, take lily water four ounces, mandrogory water one ounce, ſaffron half a ſcruple: beat the ſaffron to powder, and mix it with the waters, and drink them warm in the morning. Uſe this eight days together.

Some excellent REMEDIES *againſt barrenneſs, and to cauſe Fruitfulneſs.*

TAKE broom flowers, ſmallage, parſley ſeed, cummin, mugwort, featherfew, of each half a ſcruple; aloes half an ounce; India ſalt, ſaffron, of each half a dram; beat and mix them well together, and put to it five ounces of featherfew water warm, ſtop it up cloſe, and let it ſtand and dry in a warm place, and thus do two or three times one after another; then make each a dram into ſix pills, and take one of them every other day before ſupper.

For a purging medicine againſt barrenneſs: Take conſerve of benedicta lax, one quarter of an ounce: diaſſillo, three drams; electuary de ſucco roſatum, one dram; mix them together with featherfew water and drink it in the morning betimes. About three days after the patient hath taken the purge, let her be let blood four or five ounces in the median or common black vein in the right foot; and then take, for five days one after another, ſifted ivory a dram and a half in featherfew water; and, during the time, let her ſit in the following bath an hour together morning and night: Take wild yellow rapes, daucus, balſam wood and fruit, aſhkeys, of each two handfuls; red and white bhen, broom flowers, of each a handful; muſk three grains, amber, ſaffron, of each one ſcruple; boil all in water ſufficiently; but the muſk, ſaffron, amber, and broom-flowers, muſt be put into the decoction after it is boiled and ſtrained.

A confection very good againſt barrenneſs: Take piſtachia, pingies, cringoes, of each half an ounce, ſaffron one dram, lignum aloes, gallingade, mace, balm flowers, red and white bhen, each four ſcruples; ſhaven ivory caſſia bark, each two ſcruples; ſyrup of confected ginger twelve ounces, white ſugar ſix ounces; decoct all theſe well together in twelve ounces of balm water, and ſtir it well together; then put to it muſk and amber,

each a ſcruple : Take thereof the quantity of a nutmeg three times a day, in the morning, an hour before noon, and an hour after ſupper.

But if the cauſe of barrenneſs either in man or woman be through ſcarcity or dimunition of the natural ſeed, then ſuch things are to be taken as do increaſe the ſeed, and incite or ſtir up to venery, and further conception, which I ſhall here ſet down, and conclude this chapter of barrenneſs.

For this, yellow rape ſeed baked in bread is very good ; alſo young fat fleſh not too much ſalted ; alſo ſaffron, the ſails ſtincus, and long pepper prepared in wine. But avoid ſour, ſharp, doughy and ſlimy meats, long ſleep after meat, ſurfeiting and drunkenneſs, and as much as they can, keep themſelves from ſorrow.

Theſe things following increaſe the natural ſeed and ſtir up venery, and recover the ſeed again when it is loſt, viz. eggs, milk, rice boiled in milk, ſparrow's brains, fleſh, bones and all , the bones and pizzles of bulls, bucks, rams, and bears ; alſo cock ſtones, lamb ſtones, partridges, quails, and pheaſant eggs ; for this is an undeniable aphoriſm, that whatever any creature is addicted unto, they move or incite the woman or man that eats them to the like ; and therefore partridges, quails, ſparrows, &c. being extremely addicted to venery, they work the ſame effect in thoſe men and women that eat them. Alſo take notice that in what parts of the body the faculty which you would ſtrengthen lies, take the ſame part of the body of another creature, in whom the faculty is ſtrong as a medicine. As for inſtance, the procreative faculty lies in the teſticles, therefore cock ſtones, lamb ſtones, &c. are proper to ſtir up venery. I will alſo give you another general rule : all creatures that are fruitful being eaten, make them fruitful that eat them : as crabs, lobſters, prawns, pigeons, &c. The ſtones of a fox dried and beaten to powder, and a dram taken in the morning in ſheep's milk, and the ſtones of a boar taken in the like manner, are very good. The heart of a mail quail carried about the man, and the heart of a female quail carried about the woman, cauſeth natural love and fruitfulneſs. Let them alſo that would increaſe their ſeed, eat and drink of the beſt as near as they can : for *ſince cerere et libero frigit Venus*, is an old proverb, which is, Without good meat and good drink, Venus will be frozen to death.

Pottiges are good to increaſe the ſeed, ſuch as are made of beans, peaſe and lupines, and mix the reſt with ſugar. French beans, wheat ſodden in broth, annis ſeeds, alſo onions ſtewed, garlicks, leeks, yellow rapes freſh bugwort roots, oringo roots confected, ginger confected, &c. Of fruits ; hazel nuts, cypreſs nuts, piſtachia almonds, and marmipane made thereof. Spices good to increaſe ſeed, are cinnamon, cardimum, galengal, long pepper, cloves, ginger, ſaffron, aſſafœtida, take a dram and a half in good wine, is very good for this purpoſe.

The weakneſs and debility of a man's yard being a great hinderance to procreation, let him to ſtrengthen it, uſe the following ointments : Take wax, oil of beverco'd, majorum gentle, add oil of coſtus, of each a like quantity, mix it into an ointment, and put to it a little muſk, and with it anoint the yard cods, &c. Take of houſe emmets three drams, oil of white ſefanum, oil of lilies of each an ounce ; pound and bruiſe the ants, and put them to the oil, and let them ſtand in the ſun ſix days, then ſtrain out the oil, and add to it euphorbium one ſcruple, pepper and rue, of each one dram ; muſtard ſeed half a dram. Set this again all together in the ſun two or three days, then anoint the inſtruments of generation therewith. So much for this chapter.

CHAP. II.

The Diseases of the Womb.

I HAVE already said, that the womb is the field of generation; and if this field be corrupted, it is in vain to expect any fruit though it be never so well sown; it is therefore not without reason, that I intend in this chapter to set down the several distempers to which the womb is obnoxious, and proper and safe remedies against them.

SECTION I. *Of the hot Distemper of the Womb*

THIS distemper consists in the excess of heat; for the heat of the womb is necessary for conception, but if it be too much, it nourisheth not the seed, but disperseth its heat, and hinders the conception: this preternatural heat is sometimes from the birth, and makes them barren; but if it be accidental it is from hot causes that bring the heat and the blood to the womb: it arises also from internal and external medicines, and from too much hot meat, drinks and exercise. Those that are troubled with this distemper have but few courses, and those yellow, black, burnt or sharp, have hair betimes on their privities; they are very prone to lust, and are subject to the headach, and abound with choler. And when the distemper is strong upon them, they have but few terms, and out of order, being bad and hard to flow, and in time become hypochondriacs, and for the most part barren, having sometimes a frenzy of the womb.

The remedy is to use coolers, so that they offend not the vessels that must be open for the flux of the terms. Therefore inwardly use coolers, such as succory, endive, violets, water lilies, sorrel, lettuce, sanders, and syrups, and conserves made thereof. Also take conserve of succory, violets, water lilies, burrage, each an ounce; conserve of roses half an ounce, diamargaton frigid, diatriasantal, each half a dram; and with syrup of violets, or juice of citrons, make an electuary. For outward applications make use of ointment of roses, violets, water lilies, gourds, Venus-navel applied to the back and loins.

Let the air be cool, her garments thin, and her meat endive, lettuce, succory, and barley. Give her no hot meats, nor strong wine, unless mixed with water. Rest is good for her, but she must abstain from copulation, though she may sleep as long as she will.

SECTION II. *Of the cold Distemper of the Womb.*

THIS distemper is the reverse of the foregoing, and equally an enemy to generation, being caused by cold quality abounding to excess, and proceeds from too cold air, rest, idleness and cooling medicines. It may be known by an aversion to lechery, and taking no pleasure in the act of copulation when they spend their seed. Their terms are phlegmatic, thick, and slimy, and do not flow as they should. The womb is windy, and the seed crude and watery. It is the cause of obstructions and barrenness, and hard to be cured.

For the cure of this distemper use this water: Take galengal, cinnamon, nutmeg, mace, cloves, each two drams; ginger cubebs, zedory, cardamum, each an ounce; grains of Paradise, long pepper, each half an ounce: beat them and put them into six quarts of wine for eight days; then add sage, mint, balm, motherwort, each three handfuls. Let them stand eight days more, then pour off the wine, and beat the herbs and the spices, and then pour on the wine and distil them. Or you may use this: Take cinnamon, nutmegs, cloves, mace, ginger, cubebs, cardamums, grains

of Paradise, each an ounce and a half, galengal six drams, of long pepper half an ounce, zedory five drams, bruise them, and add six quarts of wine: put them into a cellar nine days, daily stirring them: then add of mint two handfuls, and then let them stand fourteen days, pour off the wine and bruise them, and then pour on the wine again, and distil them. Also anoint with oil of lilies, rue, angelica, bays cinnamon, cloves, mace, and nutmeg. Let her diet and air be warm, her meat of easy concoction, seasoned with annis seed, fennel, and thyme, and let her avoid raw fruits and milk diets.

Section III. *Of the Inflation of the Womb.*

THE inflation of the womb, is the stretching of it by wind, called by some a windymole, the wind proceeding from a cold matter, whether thick or thin, contained in the veins of the womb, by which the weak heat thereof is overcome, and it either flows thither from other parts, or is gathered there by cold meats or drinks: cold air may be a procuring cause of it also, as lying-in women are exposed to it. The wind is contained either in the cavity of the vessels of the womb, or between the tunicles, and it may be known by a swelling in the region of the womb, which sometimes reaches to the navel, loins, and diaphragma: and it arises and abates as the wind increaseth or decreaseth. It differs from the dropsy, in that it never swells so high; and that neither the physician nor midwife may take it for conception, let them observe the signs of women with child laid down in the first part of the book; and if one sign be wanting, they may suspect it to be an inflation, of which this is a further sign, that in conception the swelling still increaseth; also, if you strike upon the belly in an inflation, there will be a noise, but not so in case there be a conception. It also differs from a mole, because in that there is a weight and hardness in the belly; and when they move from one side to another, they feel a weight which moving; but not so in this. If the inflation be without the cavity of the womb, the pain is greater and more extensive, nor is there any noise, because the wind is more pent up.

This distemper is neither of any long continuance, nor dangerous, if looked after in time, and if it be in the cavity of the womb, is more easily expelled. To which purpose give her diaphonicon, with a little castor and sharp clysters that expel wind. If this distemper happens to a woman in travail, let her not purge after delivery, nor bleed, because it is from a cold matter; but if it come after child-bearing, and her terms come down sufficiently, and that she has fulness of blood, let the sephæna vein be opened; after which let her take the following electuary: take conserve of betony, rosemary, of each an ounce and a half; candied eringoes, citron peels candied, each half an ounce, diacimium, galengal, each a dram, oil of annis seed six drops, and with syrup of citrons make an electuary. For outward applications make a cataplasm of rue, mugwort, camomile, dill, calamints, new pennyroyal; thyme, with oil of rue, keir, and camomile; and let the following clysters, to expel wind, be put into the womb: Take agnus, castus, rue, calamint, each an handful; annis seed, castus, cinnamon, each two drams, boil them in wine to half a pint. She may likewise use sulphur, baths, and spaw waters, both inward and outward, because they expel wind.

Section IV. *Of the Dropsy of the Womb.*

THIS is another morbifick effect of the womb, proceeding from water, as that before mentioned did from wind, by which the belly is so

ſwelled, that it deceives many, cauſing them to think themſelves with child when indeed they are not. This is an unnatural ſwelling raiſed by the gathering together of waters, from moiſture mixed with the terms, and an evil ſanguification from the liver and ſpleen; alſo by immoderate drinking, or eating of crude meats; all which cauſing a repletion, do ſuffocate the native heat: It may alſo be cauſed by overflowing of the courſes, or by any other immoderate evacuation. The ſigns of this diſtemper, are the lower parts of the belly, with the privities puffed up and pained: the feet ſwell, the natural colour of the face decays: the appetite is departed; the terms alſo are fewer, and ceaſe before their time; her breaſts are alſo ſoft, but without milk. This is diſtinguiſhed from a general dropſy, in that the lower parts of the belly are moſt ſwelled; neither does the ſanguificative faculty appear ſo hurtful, nor the urine ſo pale, nor the countenance ſo ſoon changed; neither are the ſuperior parts ſo extenuated, as in a general dropſy. But yet this diſtemper foretels the total ruin of the natural functions, by that ſingular conſent the womb hath with the liver, and therefore an evil habit of body or a general dropſy will follow.

For the cure of this diſeaſe, firſt mitigate the pain with fomentations, of mellilot, mallows, lintſeed, camomile, and althæ, then let the humour be prepared with ſyrup of ſtoeſhus, calamint, mugwort, both ſorts, with the diſtilled waters or decoctions of dodder, marjorum, ſage, oringe, ſpeerage, pennyroyal, and betony; and let her purge with ſenna, agarick rhubarb, and eliterian. Take calamints, mugwort, lovage roots, pennyroyal, each an handful; ſavil a pugil; madder roots, angelica, of each an ounce; boil them in water, and ſweeten them with ſugar. Or, if ſhe likes it better, make broths of the ſame. Alſo take ſpecirem diambree, diameſcidulcis, dicalamenti, diacinnimoni, diacimini, troce de myrrh, of each two drams, ſugar one pound; with betony water make lozenges, and let her take of them two hours before meals. Apply alſo to the bottom of the belly, as hot as can be endured, a little bag of camomile, cummin, and mellilot boiled in oil of rue; and anoint the belly and privities with unguentum Agrippæ, mingling therewith oil of Iroes. Let the lower part of the belly be covered with a plaiſter of bay-berries, or with a cataplaſm made of cummin, camomile briony roots, adding thereto cows and goat's dung. For injection into the womb, take afarum roots three drams, pennyroyal, calamint, each half a handful, ſavin, a pugil, mechoacan a dram: annis ſeed, cummin, each half a dram. Boil them and take ſix ounces ſtrained, with oil of elder and orris, each an ounce; and inject it into the womb by a metrenchita; let the air be hot and dry. Moderate exerciſe may be allowed, but much ſleep is forbidden. She may eat the fleſh of partridges, larks, chickens, mountain birds, hares, conies, &c. and drink wine mixed with a little water.

Section V. *Of the inflammation of the Womb.*

THIS is a tumour poſſeſſing the womb, accompanied with unnatural heat, by obſtruction, and gathering together of corrupt blood; for the blood that comes to the womb, gets out of the veſſels into its ſubſtance and grows hot, putreſies, and cauſeth an inflammation, either all over, or in part, before or behind, above or below. This happens alſo by ſuppreſſion of the menſtrues, repletion of the whole body immoderate copulation, often handling of the gentials, difficult child-birth, vehement agitation of the body, or by falls or blows. The ſigns of this inflammation are tumours with heat and pain in the region of the womb, ſtretching and heavineſs in the privities, alſo a pain in the

head and ſtomach, with vomiting, coldneſs of the knees, convulſions of the neck, doting, trembling, of the heart: and ſometimes ſtraitneſs of breath by reaſon of heat which is communicated to the diaphragma, or midriff; and the breaſts ſympathizing with the womb, are pained and ſwelled; but more particularly, if the fore part of the matrix be inflamed, the privities are grieved, and the urine is ſuppreſſed, or flows forth with difficulty: if it be behind, the loins and back ſuffer, and the belly is bound: if the inflammation be in the bottom of the womb, the pain is towards the navel; if the neck of the womb be affected, the midwife, putting up her finger, may feel the mouth of it retracted, and cloſed up, with a hardneſs about it. As to the prognoſticks of it, all inflammations of the womb are dangerous and ſometimes deadly, eſpecially if it be all over the womb; if the woman be with child ſhe rarely eſcapes, an abortion follows, and the mother dies.

As to the cure: firſt, Let the humours flowing to the womb be repelled; for the effecting of which after the belly hath been opened by the cooling clyſters, letting of blood will be needful: open therefore a vein in the arm, but have care of bleeding in the foot, leſt thereby you draw more blood to the womb, but if it be from the terms ſtopt, you may. The opinion of Galen is, that the blood may be diverted by bleeding in the arm, or cupping of the breaſts, and that it may be by opening an ancle vein, and cupping upon the hips. Then purge gently with caſſia, rhubarb, ſenna, and mirobolans thus, Take ſenna two drams, annis ſeed one ſcruple, mirobolans half an ounce, barley water a ſufficient quantity make a decoction, diſſolve it in ſyrup of ſuccory, with rheubarb two ounces, pulp of caſſia half an ounce, oil of annis ſeed two drops and make a potion. At the beginning of the diſeaſe anoint the privities and reins with oil of roſes and quinces. Make plaiſters of plantain, lint ſeed, barley meal, mellilot, fenugreek, and white of eggs; and if the pain be vehement, add a little opium. For repellers and anodynes take Venus navel, purſlain, lettuce, houſleek, vine leaves, each a handful, boil them in wine; barley meal two ounces pomegranate flowers two drams, boil a dram with oil of roſes, and make a poultice. Or take diacibilou ſimple two ounces, juice of Venus navel, and plantain each half an ounce; take of fenugreek, mallow roots, decocted figs, lint ſeed, barley meal, dove's dung, turpentine, each three drams; deer's ſuet half a dram, opium half a ſcruple, and with wax make a plaiſter. After it is ripe break it by motion of the body, coughing, ſneezing, or elſe by cupping and peſſaries; as, Take rue half an handful, figs an ounce, pigeon's dung, orris roots, each half a dram; with wool, make peſſary. After it is broken, and the pains abate, then cleanſe and heal the ulcer with ſuch cleanſers as theſe; viz. Whey, barley water, honey, wormwood, ſmallage, orris, birthwort, myrrh, turpentine, allum: Take new milk boiled a pint, honey half a pint, orris powder half an ounce, and uſe it very often every day. If it break about the bladder, uſe an emulſion of cold ſeeds, whey, and ſyrup of violets. Let her drink barley water, or clarified whey, and her meat be chickens, and chicken broth, boiled with endive, ſuccory, ſorrel, bugloſs and mallows.

SECTION VI. *Of Schirroſity and Hardneſs of the womb.*

A SWELLING in the womb neglected, or not perfectly cured, often produce a ſchirroſity in the matrix, which is a hard in-

ſenſible, unnatural ſwelling, cauſing barrenneſs, and begetting an indiſpoſition of the whole body. The immediate cauſe is a thick, earthly humour (as natural melancholly, for inſtance) gathered in the womb, and cauſing a ſchirrous without inflamation. It is a proper ſchirrous when there is neither ſenſe nor pain, and it is an improper ſchirrous when there is ſome little ſenſe and pain. This diſtemper is moſt uſual in women of a melancholly conſtitution, and alſo ſuch as have not been cleanſed from their menſes, or from the retention of the lochia, or after purgings; it is likewiſe ſometimes cauſed by eating corrupt meat; or thoſe inordinate longings called pica, to which breeding women are often ſubject; and laſtly, it may alſo proceed from obſtructions and ulcers in the womb, or ſome evil effects in the liver and ſpleen. It may be known by theſe ſigns; If the effect be in the bottom of the womb, ſhe feels as it were a heavy burden repreſenting a mole, yet differing, in that the breaſts are attenuated, and the whole body alſo. If the neck of the womb be hardened, no outward humours will appear, the mouth of it is retracted, and touched with the finger, feels hard: nor can ſhe have the company of a man without great pains and pricklings. This ſchirroſity or hardneſs is (when confirmed) incurable, and will turn into a cancer, or dropſy: and ending in a cancer, proves deadly; the reaſon of which is, becauſe the native heat in thoſe parts being almoſt ſmothered, it is hardly to be reſtored again.

For the cure of this, firſt prepare the humour with ſyrup of burrage, ſuccory, epicymum, and clarified whey; which being done, take of theſe pills following, according to the ſtrength of the patient: take hiera-picra, ſix drams and a half; agarick, lapiſlazuli, abluti ſalis Indœ, coloquintida, of each one dram and a half; mix them, and make pills. The body being purged, proceed to mollify the hardneſs as followeth; anoint the privities and the neck of the womb with the following ointment: take oil of capers, lilies, ſweet almonds, jeſſamin, each an ounce; mucilage, fenugreek, althæ, ointment of althæ, each ſix drams; amoniacum diſſolved in wine, an ounce, which with wax make into an ointment. Then apply below the navel diachylon fernelli; and make emulſions of figs, mugwort, mallows, pennyroyal, althæ, fennel roots, mellilot, fenugreek, and lintſeed boiled in water; but for injection, take bdellium diſſolved in wine, oil of ſweet almonds, lilies, camomile, each two ounces, marrow of veal bones, and hen's greaſe, each an ounce, with the yolk of an egg. The air muſt be temperate; and as for her diet, let her abſtain from all groſs, vicious and ſalt meats, ſuch as pork, fiſh, old cheeſe, &c.

SECTION VII. *Of the ſtraitneſs of the Womb and its Veſſels.*

THIS being ſeated in the veſſels of the womb, and neck thereof is an obſtruction to the bearing of children, as it hinders both the flowing of the menſes and conception. The cauſe of this ſtraitneſs is thick and tough humours that ſtop the mouth of the veins and arteries; theſe humours, are bred of groſs or too much nouriſhment: when the heat of the womb is ſo weak that it cannot attenuate the humour which, by reaſon thereof, either flow from the whole body, or are gathered into the womb. Now, the veſſels are made cloſer or ſtraighter ſeveral ways; ſometimes by inflammations, ſchirrous, or other tumours; ſometimes by compreſſions, or by a ſcar, or fleſh, or membrane, that grows after the wound. The ſigns by which this is

known, are ſtoppage of the terms, not conceiving, crudities abounding in the body, which are known by particular ſigns; for if there was a wound, or the ſecundine was pulled out by force, phlegm comes from the wound. If ſtoppage of the terms be from an old obſtruction by humours, it is hard to be cured; if it is only from the diſorderly uſe of aſtringents, it is more curable; if it be from a ſchirrous, or other tumours that compreſs or cloſe the veſſels the diſeaſe is incurable.

For the cure of that which is curable, obſtructions muſt be taken away, phlegm muſt be purged, and ſhe muſt be let blood, as will be hereafter directed in the ſtoppage of the terms. Then uſe the following medicines: Take of annis ſeed and fennel-ſeed, each a dram; roſemary, pennyroyal, calamint, betony flowers, each an ounce; ceſtus, cinnamon, galengal, each half an ounce; ſaffron half a dram, with wine. Or, take aſparagus roots, parſley roots, each an ounce: pennyroyal, calamint, each a handful; wall flowers, dill flowers, each two pugils; boil, ſtrain, and add ſyrup of mugworth, an ounce and a half. For a fomentation, take pennyroyal, mercury, calamint, marjorum, mugwort, each two handfuls; ſage, roſemary, bays, camomile-flowers, each an handful; boil them in water, and foment the groin and bottom of the belly, or let her ſit up to the navel in a bath, and then anoint about the groin with oil of rue, lilies, dill, &c.

Section VIII. *Of the falling of the Womb.*

THIS is another evil effect of the womb, which is both very troubleſome, and alſo a hinderance to conception. Sometimes the womb falleth to the middle of the thighs, nay, almoſt to the knees, and it may be known then by its hanging out. Now that which cauſeth the womb to change its place, is when the ligaments by which it is bound to the other parts are not in order: for there are four ligaments, two above, broad and membraneous, that come from the peritoneum, and two below that are nervous, round and hollow; it is alſo bound by the great veſſels by veins and arteries, and to the back by nerves. Now the place is changed when it is drawn another way, or when the ligaments are looſe, and it falls down by its own weight. It is drawn on one ſide when the menſes are hindered from flowing, and the veins and arteries are full, namely, thoſe which go to the womb. If it be a mole on one ſide, and the ſpleen cauſe it; by the liver veins on the right ſide, and the ſpleen on the left, as they are more or leſs filled. Others are of opinion it comes from the ſolution of connection of the fibrous neck, and the parts adjacent, and that from the weight of the womb deſcending. This we deny not; but the ligaments muſt be looſe or broken. But women in a dropſy could not be ſaid to have the womb fallen down, if it came only from looſeneſs: but in them it is cauſed by the ſaltneſs of the water, which drys more than it moiſtens. Now, if there be a little tumour within or without the privities, it is nothing elſe but a deſcent of the womb; but if there be a tumour like a gooſe-egg, and a hole at the bottom, there is at firſt a great pain in the parts to which the womb is faſtened, as the loins, the bottom of the belly, and the os ſacrum, which proceeds from the breaking or ſtretching of the ligaments; but a little after pain abates; and there is an impediment in walking; and ſometimes blood comes from the breach of the veſſels,

and the excrements and urine are ſtopt, and then a fever and a convulſion enſueth, which oftentimes proves mortal, eſpecially if it happens to women with child.

For the cure of this diſtempor, firſt put it up before the air alter it, or it will be ſwollen or inflamed; and therefore firſt of all give a clyſter to remove the excrement; then lay her on her back, with her legs abroad, and thighs lifted up, and head down; then take the tumour in your hand and thruſt it in without violence; If it be ſwelled by alteration and cold, foment it with the decoction of mallows, althæ, line, fenugreek, camomile-flowers, bay-berries, and anoint it with oil of lilies and hen's greeſe. If there be an inflammation, do not put it up, but fright it in, by putttng red-hot iron before it, and making a ſhew as if you intended to burn it; but firſt ſprinkle upon it the powder of maſtich, frankincenſe, and the like: Take frankincenſe, maſtich each two drams; farcecol ſteeped in milk, half a dram; mummy, pomegranate flower, ſanguis draconis, each half a dram; when it is put up, let her lie with her legs ſtretched, and one upon the other, for eight or ten days, and make a peſſary in the form of a pear, with cork or ſponge, and put it into the womb, dipped in ſharp wine, or juice of acacia, with powder of ſanguis, galbanum, bdellium. Alſo apply a cupping glaſs with great flame under the navel or paps, or to both kidneys, and lay this plaiſter to the back: Take opponix two ounces, ſtorax liquid half an ounce, maſtich, frankincenſe, pitch, bole, each two drams, then with wax make a plaiſter; or laudanum a dram and a half, maſtich, and frankincenſe, each half a dram, wood aloes, cloves, ſpikes, each a dram; aſh coloured amber-greaſe four grains, muſk half a ſcruple; make two round plaiſters to be laid on each ſide of the navel; make a fume of ſnail-ſkins ſalted, or of garlick, and let it be taken in the funnel. Uſe alſo aſtringent fomentations of bramble leaves, plaintain, horſetail, myrtles, each two handfuls, wormſeed two pugils, pomegranate-flowers, half an ounce, boil them in wine and water. For an injection, take comfrey roots an ounce, rupture wort two drams, yarrow, mugwort each half an ounce, boil them in red wine, and inject it with a ſyringe. To ſtrengthen the womb, take hartſhorn, bays, of each a dram, myrrh half a dram: make a powder for two doſes, and give it with ſharp wine. Or, Take zedoary, parſnip ſeed, crabs-eyes, prepared, each a dram; nutmeg half a dram, and give a dram in powder: but aſtringents muſt be uſed with great caution, leaſt by ſtopping the courſes a worſe miſchief follow. To keep it in its place, make rollers and ligatures as for the rupture; and put peſſaries into the bottom of the womb, that may force it to remain. I know ſome phyſicians object againſt this, and ſay they hinder conception; but others in my opinion, much more juſtly affirm, that they neither hinder conception, nor bring any inconvenience; nay, ſo far from that, they help conception, and retain it, and cure the diſeaſes perfectly. Let the diet be ſuch as are of drying aſtringent, and glewing qualities, ſuch as rice, ſtarch, quinces, pears, and green cheeſe: but let ſummer fruits be avoided, and let her wine be aſtringent and red.

CHAP. III.

Of Diſeaſes relating to Women's monthly courſes.

SECTION I. *Of Women's monthly Courſes in general.*

DIVINE providence which, with a wiſdom worthy of itſelf, has appointed woman to conceive by coition with the man, and to

bear and bring forth children, has provided for the nouriſhment of children during their receſs in the womb of their mother by that redundancy of the blood which is natural to all women, and which flowing out at certain periods of time (when they are not pregnant) are from thence called terms and menſes from their monthly flux of excrementitious and unprofitable blood; which is only to be underſtood with reſpect to the redundancy thereof, being and excrement only with reſpect to its quantity, for as to its quality it is as pure and incorrupt as any blood in the veins; and this appears from the final cauſe of it, which is the propagation and conſervation of mankind; and alſo from the generation of it, it being the ſuperfluity of the laſt aliment of the fleſhy parts. If any aſk, If the menſes be not of a hurtful quality, how can it have ſuch venomous effects, as if it fall upon trees and herbs, it makes the one barren, and mortifies the other? I anſwer, this malignity is contracted in the womb; for the woman wanting native heat to digeſt this ſuperfluity, ſends it to the matrix, where ſeating itſelf till the mouth of the womb be dilated, it becomes corrupt and mortified, which may eaſily be, conſidering the heat and moiſtneſs of the place; and ſo this blood being out of its proper veſſels, and too long retained, offends in quality. But if regidity be the cauſe why women cannot digeſt all their laſt nouriſhment, and by conſequence have theſe monthly purgations, how comes it to paſs, may ſome ſay, that they are ſo cold a conſtitution more than men? Of this I have already ſpoken in the chapter of barrenneſs; It is chiefly thus: The Author of our being has laid an injunction upon men and women to propagate their kind, hath alſo wiſely fited them for that work; and ſeeing that in the act of coition there muſt be an agent and patient (for if they be of one conſtitution, there can be no propagation) therefore the man is hot and dry, and the woman cold and moiſt. It is therefore neceſſary that the woman ſhould be of a cold conſtitution, becauſe in her is required a redundancy of matter for the nouriſhment of the infant depending on her. And this is wiſely ordained by nature, for otherwiſe the child would detract from and weaken the principal parts of the mother; which would moſt unnaturally render the proviſion of the infant to be the deſtruction of the parent. Now, theſe monthly purgations uſually begin about the 14th year, and continue till the 46th or 50th year: yet not ſo conſtantly, but that oftentimes there happens a ſuppreſſion, which is ſometimes natural and ſometimes morbifical. When they are naturally ſuppreſt, it is either in breeding women, or ſuch as give ſuck; but that which is morbifical, muſt be the ſubject of the following ſection.

Sec. II. *Of the ſuppreſſion of the monthly Courſes.*

THE ſuppreſſion of the terms, which is morbific, is an interception of that accuſtomary evacuation of blood which ſhould come from the matrix every month, and which proceeds from the matter vitiated. The cauſe of this ſuppreſſion is either internal or external: The internal cauſe is either inſtrumental or material, in the blood or in the womb. The blood may be faulty two ways in quantity or in quality; in quantity, when it is ſo conſumed that there is no overplus left, as in viragoes, and all virile women, who through their heat and ſtrength of nature digeſt and conſume all their beſt nouriſhment; but women of this conſtitution are rather to be ac-

counted anthropophageæ, that is women eaters, than women-breeders; becauſe they conſume one the principles of generation, which gives a being to the world, *i. e.* the menſtruous blood. The blood may alſo be conſumed, and the terms ſtayed by too much bleeding at the noſe and likewiſe by a flux of the hemorrhoides, or by adyſenteria, evacuations, chronical and continued diſeaſes. But ſecondly, the matter may be vicious in quality, as if it be ſanguineous phlegmatical, melancholic; each of theſe, if they offend in groſſneſs, will cauſe an obſtruction in the veins.

The womb alſo may be in fault divers ways, as by the narrowneſs of the veins and paſſages, by apoſthumes, tumours, ulcers, and by overmuch cold or heat, the one vitiating the action, and the other conſuming the matter; alſo, by an evil compoſition of the uterine parts by the neck of the womb being turned a ſide; and ſometimes, though but rarely by a membrane or excreſſence of fleſh growing about the womb.

The external cauſe may be heat, or dryneſs of the air, immoderate watching, great labour, violent motion, whereby the matter is ſo conſumed, and the body ſo exhauſted, that there is no redundant blood remaining to be expelled; whence it is recorded of the Amazons, that beingactive, and always in motion, they had little or no monthly fluxes, it may alſo be cauſed from cold; and moſt frequently it is ſo, making the blood vicious and groſe, condenſing and binding up the paſſages, that it cannot flow forth. The ſigns of the diſeaſe are pains in the head, neck, back, and loins, with wearineſs of the whole body, but eſpecially of the hips and legs, by reaſon of a conſinity which the womb hath in thoſe parts; if the ſuppreſſion proceeds from cold, it cauſes a heavy ſluggiſh diſpoſition, a pale colour a ſlow pulſe, the urine crude, wateriſh, and much in quantity, and no deſire to copulation, the excrements of the guts being uſually retained: but if it proceeds from heat, the ſigns are contrary. If it be natural, or cauſed by conception, it may be known by drinking water and honey after ſupper, going to bed; for if after the taking it, it cauſeth the woman to feel a bearing pain about the navel and lower part of the belly, it is a ſign ſhe hath conceived, and that the ſuppreſſion is natural, if not, then it is vicious, and ought medicinally to be taken away, otherwiſe many dangerous diſeaſes will follow, ſuch as ſwoonings, faintings, intermiſſion of pulſe, obſtructions, epilepſies, apoplexes, frenzies, melancholly, paſſions, &c. which makes it highly neceſſary to ſay ſomething now of the cure.

The cure of this diſtemper muſt be by evacuation, for this ſuppreſſion is a phlethorick effect, it will therefore be beſt in the midſt of the menſtrual period to open the liver vein; and for the reverſion of the humour two days before the wonted evacuation, open the ſaphæna veins of both feet: and if the repletion be not great, apply cupping glaſſes to the legs and thighs, after letting blood, the humour muſt be prepared and made flexible with ſyrup of ſtæchus, horehound, hyſop, betony, maiden hair, of each one handful, make a decoction, and take thereof three ounces of ſyrup of mugwort, ſuccory, maiden hair, mix each half an ounce; and after ſhe comes out of the bath, let her drink it off. Then purge pil. de Agarick, Elephang, Coch; Fædit. Galen in this caſe commends Pilula de Hiera cum coloquintida; for as they are proper to purge the humour offending, ſo they open the paſſage of the womb. If the ſtomach be overcharged, let her take a vomit, but let it be ſo prepared as to act both ways, leſt the humours ſhould be

too much turned back by working only upwards; to which end, take trockisk of agaria two drams, infuse them in three ounces of oximel, in which dissolve benedict. laxat. half an ounce, and of the electuary diasarum one scruple; and let her take it after the manner of a purge. When the humour has been thus purged, you may proceed to more proper and forcible remedies. Take extract of mugwort one scruple and a half, rinds of cassia, parsley seed, castor, of each a scruple; and with juice of smallage, after supper going to bed. Also, administer to the lower parts suffumigations of amber, unctions, injections and incessions; make suffumigations of amber, galbanum, melanthum, bayberries, lugwort, cinnamon, nutmegs, cloves, &c. Make pessaries of figs, and the leaves of mercury bruised, and rolled up with lint. Make injections of the decoction of mercury, betony, origin, mugwort, and figs, and inject it into the womb by an instrument fit for that purpose. For unction, take ladant, oil of myrrh, of each two drams: oil of lilies, almonds, capers, camomile, of each half an ounce, and with wax make an unguent, with which let the place be anointed. Let the air be hot, and dry, her sleep shorter than ordinary, let her use moderate exercise before meals, and let her meat and drink be attenuating.

Section III. *Of the Overflowing of the monthly Courses.*

THIS distemper is directly contrary to that of which I have spoken, in the foregoing section, and is no less dangerous than the other, and therefore requires to be spoken of next in order. This distemper is a sanguineous excrement, proceeding from the womb and exceeding in time and quality. I call it sanguineous, because there are two ways by which the blood flows forth, one is by the internal veins in the body of the womb, which is properly called the monthly flux; the other is, by those veins which are terminated in the neck of the matrix, which some physicians call the hemorrhoides of the womb: and that it exceeds in quantity, when they flow about three days; but this is the most certain sign of their excess in flowing, when they flow so long that the faculties of the body are thereby weakened; for in bodies abounding with gross humours, this immoderate flux does sometimes unburden nature of her load, and is not to be stopt without advice from a physician.

The cause of this immoderate flowing is either external or internal. The external cause may be the heat of the air, lifting and carrying heavy burdens, unnatural child-births, falls, &c. The internal cause may be threefold, in the matter, instrument, or faculty: the matter, which is the blood, may be vicious two ways; first, in quantity being so much that the veins are not able to contain it: secondly, in quality, being adust, sharp, waterish, or unconnected The instrument, viz. the veins, are faulty by the dilation of the orifice, which may be caused two ways: first, by the heat of the constitution, climate, or season, heating the blood, whereby the passages are dilated, and the faculty weakened, that it cannot retain the blood: secondly, by falls, blows, violent motion, breaking of a vein, &c.

This inordinate flux may be known by the appetite being decayed, the concoction depraved, and all the actions of the body weakened; the feet swelled, the colour of the face changed, and a general feebleness possesseth the whole body. If it comes by the breaking of a vein, the body is sometimes cold, the blood flows forth on heaps, and that

ſuddenly, with great pain: if it comes through heat the orifice of the veins being dilated, then there is little or no pain, yet the blood flows faſter than it doth in a roſion, and not ſo faſt as in a rupture. If by roſion, or ſharpneſs of blood, ſhe feels a great heat ſcalding the paſſage it differs from the other two, in that it flows not ſo ſuddenly, nor ſo copiouſly as they do. If it be by weakneſs of the womb, ſhe has an averſion to copulation; if it proceeds from the blood, drop ſome of it on a cloth, and when it is dry, you may judge of the quality by the colour; if it be choleric, it will be yellow, if melancholy, black, if phlegmatic, wateriſh and whitiſh.

The cure for this conſiſts in three particulars. Firſt in repelling and carrying back the blood: ſecondly, in correcting and taking away the fluxibility of the matter: and thirdly, in corroborating the vein or faculties. For the firſt, to cauſe a regreſſion of the blood, open a vein in her arm, and draw out ſo much blood as the ſtrength of the patient will permit, and that not an ounce, but at ſeveral times, for thereby the ſpirits are leſs weakened, and the retraction ſo much the greater. Apply the cupping-glaſs to the liver, that the reverſion may be in the fountain. To correct the fluxibility of the matter, cathartics moderated with aſtrictories may be uſed. If it be cauſed by ſharpneſs of blood, conſider whether the corroſion be by ſalt phlegm, or aduſt cholar; if by ſalt phlegm, prepared with ſyrup of violet, wormwood, roſes, citron peels, ſuccory, &c. then take this purgation: Miroholans, chervil, half an ounce, trochiſks of agaric one dram, with plantain water make a decoction, add thereto ſyr. roſar. lux, three ounces, and make a potion. If by a aduſt cholar, prepare the body with ſyrup of roſes, myrtles, ſorrel, purſlain, mixed with water of plantain, knotgraſs, and endive, then purge with this potion: Take rinds of miroholans, rhubarb, of each one dram, cinnamon fifteen grains, infuſe them one night in endive water, add to it the ſtrained pulp of tamarinds caſſia, of each half an ounce, ſyrup of roſes one ounce, and make a potion. If the blood be wateriſh and unconnected, as it is in hydrodical bodies, and flows forth by reaſon of the tenury, to draw off the water will be profitable, to which end purge with agaric, elaterium, and coloquintida. Sweatings is alſo very proper in this caſe, for by it the matter offending is taken away, and the motion of the blood is carried to the outward parts. To procure ſweat, uſe cardanum water with mithridate, or the decoction of guiacum, ſaſſafras, ſarſaparilla: gum of guiacum does alſo greatly provoke ſweat: and pills of ſarſaparilla, taken every night at going to bed, are worthily commended. If the blood flows forth from the opening or breaking of a vein, without any evil quality of itſelf, then ought corroberatives only to be applied, which is the thing to be done in this inordinate flux; bole armoniac one ſcruple, London treacle one dram, old conſerve of roſes, half an ounce, with ſyrup of myrtles, make an electuary. Or, if the flux has continued long, take of maſtich two drams, olibani. tinct. de careble, of each one dram, balanſtium one ſcruple, make a powder; with ſyrup of quinces make it into pills, and take one always before meals.

SECTION IV. *Of Terms coming out of Order, either before or after the uſual Time.*

BOTH theſe ſhew an ill conſtitution of body. Every thing is beautiful in its order, in nature as well as in morality, and if the order

of nature be broke, it ſhews the body to be out of order. Of each of theſe effects briefly.

When the monthly courſes come before their time, it ſhews a depraved excretion that comes for the time often flowing ſometimes twice a month: The cauſe why they come ſooner is in the blood, which ſtirs up the expulſive faculty in the womb, or ſometimes in the whole body, cauſed oftentimes by the perſon's diet, which increaſes the blood too much, makes it too ſharp or too hot: and if the retentive faculty of the womb be weak, and the expulſive faculty ſtrong, and of a quick ſenſe, it brings them forth the ſooner, and ſometimes they flow ſooner by reaſon of a fall, ſtroke, or ſome violent paſſion, which the parties themſelves can beſt relate. If it be from heat, thin and ſharp humours, it is known by the diſtemper of the whole body. The looſeneſs of the veſſels, and weakneſs of the retentive faculty, is known from a moiſt and looſe habit of body. It is more troubleſome than dangerous, but hinders conception, and therefore the cure is neceſſary for all, but eſpecially ſuch as deſire children. If it proceeds from a ſharp blood, let her temper it by a good diet and medicines: for which purpoſe, let her uſe baths of iron water, that correct the diſtemper of the bowels, and then evacuate. If it proceeds from the retentive faculty, and looſeneſs of the veſſels, it is to be corrected with gentle aſtringents.

As to the courſes flowing after the uſual time, the cauſes are thickneſs of the blood, and the ſmallneſs of its quantity, with the ſtraitneſs of the paſſage and weakneſs of the expulſive faculties, either of theſe ſingle, may ſtop the courſes, but if they all concur, they render the diſtemper the worſe. If the blood abounds not in ſuch a quantity as may ſtir up nature to expel it, its purging muſt neceſſarily be deferred till there be enough. And if the blood be thick, the paſſage ſtopped, and the expulſive faculty, weak, the menſes muſt needs be out of order, and the purging of them retarded.

For the cure of this, if the quantity of blood be ſmall, let her uſe a larger diet and very little exerciſe. If the blood be thick and foul, let it be made thin, and the humours mixed therewith be evacuated. It is good to purge after the courſes have done flowing, and to uſe calaminta: and indeed the oftener ſhe purge the better. She may alſo uſe fume and peſſaries, apply cupping-glaſſes without ſcarification to the inſides of the thighs, and rub the legs, and ſcarify the ancles, and hold the feet in warm water four or five days before the courſes come down. Let her alſo anoint the bottom of her belly with things proper to provoke the terms.

Section V. *Of the falſe Courſes, or Whites.*

THE whites or falſe courſes are a foul excretion from the womb, for, from the womb proceeds not only the menſtruous blood, but accidentally many other excrements, which is a diſtillation of a variety of corrupt humours through the womb, flowing from the whole body, or part of the ſame; which though called the whites, are ſometimes blue or green, or reddiſh, not flowing at a ſet time, or every month, but in a diſorderly manner, ſometimes longer, and ſometimes ſhorter. It is different from the running of the reins, both leſs in quantity and whiter and thicker in quality, and coming at a great diſtance; it is different alſo from thoſe night pollutions which is only in ſleep, and doth proceed from the imagination of venery.

The cauſe of this diſtemper is either promiſcuouſly in the whole body, by a cachochymia, or weakneſs of the ſame; or in ſome of the parts, as in the liver, which by the inability of the ſanguificative faculty, cauſeth a generation of corrupt blood, and then the matter is reddiſh: ſometimes in the gall, being remiſs in its office, not drawing away thoſe choleric ſuperfluities which are engendered in the liver, and then the matter is yellowiſh: ſometimes in the ſpleen, not defecating and cleanſing the blood of the excrementitious parts, and then the matter flowing forth is blackiſh. It may alſo come from catarrhs in the head, or from any other putrified or corrupt member. But if the matter of the flux be white, the caſe is either in the ſtomach or reins. In the ſtomach, by a phlegmatical and crude matter there contracted and vitiated through grief, melancholy, and other diſtempers; for otherwiſe, if the matter were only pituitous, and no ways corrupt or vitiated, being taken into the liver, it might be converted into blood; for phlegm in the ventricle is called nouriſhment half digeſted; but being corrupt, although it be ſent into the liver, it cannot correct that which the firſt hath corrupted, and therefore the liver ſends it to the womb, which can neither digeſt it nor repel it, and ſo it is voided out, ſtill keeping the colour which it had in the ventricle. The cauſe alſo may be in the veins, being over heated, whereby the ſpermatical matter, by reaſon of its tenuity, flows forth. The external cauſe may be the moiſtneſs of the air, eating corrupt meats, anger, grief, ſlothfulneſs, immoderate ſleeping, and coſtiveneſs.

The ſigns are extenuation of body, ſhortneſs and ſtinking breath, loathing of meat, pain in the head, ſwelling of the eyes, melancholy, humidity, flowings from the womb, of divers colours, as reddiſh, black, green, yellow, white; it is known from the overflowing of the courſes, in that it keeps no certain period, and is of ſo many colours, all which do degenerate from blood.

For the cure of this, it muſt be by methods adapted to the caſe; and as the cauſes are various, ſo muſt be the cure.

If it be cauſed by the diſtillation from the brain, take ſyrup of betony, ſtæchas and majorum, purge with pill loch: make napalla, of the juice of ſage, hyſſop, betony, negella, with one drop of oil of cloves, and a little ſilk cotton. Take elect. dianth. aromat, roſar, diambre, daimoſci dulcis, of each one dram, nutmeg half a dram, at night going to bed.

If the matter flowing forth be reddiſh, open a vein in the arm, if not, apply ligatures to the arms and ſhoulders: ſome have cured this diſtemper by rubbing the upper parts with crude honey; and ſo Galen ſays he cured the wife of Boetus.

If it proceeds from crudities in the ſtomach, or from a cold diſtempered liver, take every morning of the decoction of lignum ſanctum: purge with pill deagarico, de harmodact, de hiera dyacolocynthid foetida, agragrative. Take of elect. aromat. roſ. two drams, citron peels dried, nutmeg, long pepper, of each one ſcruple, diagalinga one dram, ſantali alba, lign aloes, of each half a ſcruple ſugar ſix ounces, with mint water make lozenges of it, and then take it after meals.

If with frigidity of the liver be joined a repreſſion of the ſtomach, purging by vomiting is commendable; for which, take three drams of the electuary of diaru. Some phyſicians alſo allow of the diuretical means, as of opium, petroſolinum, &c.

If the matter of the diſeaſe be melancholious, prepare with ſyrup of maiden-hair, epithimum, pollipody, burrage, bugloſs, fumetory, heart's tongue, and ſyrup by ſantinum, which muſt be made without vinegar, otherwiſe it will rather animate the diſeaſe, than ſtrengthen nature; for melancholy is increaſed by the uſe of vinegar; and by Hippocrates Silvius, and Aventinus, it is diſallowed of as an enemy to the womb, and therefore not to be uſed in uterine diſeaſes.

Purges of melancholy are, Pilulæ eumartæ, pilulæ Indiæ, pilulæ de lap. Lazuli dioſena, and confectio hamech, Take ſtampt prunes two ounces, ſenna one dram, epithimum, polypody, fumetory, of each a dram and a half, four dates one ounce, with endive water make a decoction; take of it four ounces, add unto it confections hamech three drams, manna three drams. Or pilulæ indatum, phil. fætidaruni, agarici trochiſcati, of each one ſcruple, lapidus lazuli, five grains, with ſyrup of erithimum make pills, and take one every week.

If the matter of the flux be choleric, prepare with ſyrup of evdive violets, ſuccory roſes, and purge with mirobolans, manna, rhubarb, caſſia; take of rhubarb two drams, annis ſeed one dram, cinnamon a ſcruple and a half: infuſe them in ſix ounces of prune broth; add to the ſtraining of manna, an ounce, and take it according to art. Take ſpicierum diatrionſontalon, diatragacant. frig. diarrhod. As batis diaconit, of each a dram, ſugar four ounces, with plantain water make lozenges.

Laſtly, let the womb be cleanſed from the corrupt matter, and then corroborated; and for the cleanſing thereof, make injections of the decoction of betony, featherfew, mugwort, ſpikenard, biſtort, mercury, ſage, adding thereto ſugar, oil of ſweet almonds, of each two ounces: then to corroborate the womb, prepare trochiſks in this manner: Take of myrrh, featherfew, mugwort, nutmegs, mace, amber, lign, aloes, ſtorax red roſes, of each an ounce, with mucilage of tragacanth make trochiſks, caſt them on the coals and ſmother the womb therewith: Fomentations may be alſo made for the womb of red wine, in which has been decocted maſtich, fine bole, baluſtia, red roſes. Drying diet is beſt, becauſe this diſtemper uſually abounds with phlegmatic and crude humours. Immoderate ſleep is hurtful, but moderate exerciſe will do well.

Thus I have gone through the principal diſeaſes peculiar to the female ſex, and preſcribed for each of them ſuch remedies, as, with the divine bleſſing, will cure their diſtempers, confirm their health, and remove all thoſe obſtructions, which might otherwiſe prevent their bearing children: and I have brought it into ſo narrow a compaſs, that it might be of the more general uſe, being willing to put it into every one's power, that has occaſion for it, to purchaſe this rich treaſure at an eaſy rate.

THE END.

ARISTOTLE's

BOOK OF

PROBLEMS,

WITH OTHER

ASTRONOMERS, ASTROLOGERS. || PHILOSOPHERS, PHYSICIANS, &c.

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TOGETHER WITH

The Reason of divers Wonders in the Creation: The Generation of BIRDS, BEASTS, FISHES, and INSECTS; and many other Problems on the most weighty Matters, by way of Question and Answer.

A NEW EDITION.

LONDON:

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1802.

TO THE

READER.

READER,

THESE Problems having been printed very often, and finding so general an acceptance, divers books have been hoisted into the world under the name of Aristotle *so that many people have bought them, thinking they had the right sort, by which the public has been injured, as well as the proprietors.*

The matter it contains is necessary for all people to know, and, as man is said to be a microcosm, or little world, and in him the Almighty *hath imprinted his own image so lively, that no power whatsoever is able to blot it out; so his image and similitude is the soul and understanding. And notwithstanding all the perfections which man hath in himself, few or none take delight in the study of himself, or is careful to know the substance, state, condition, quality, or use of the several parts of his own body, although he be the honour of nature, and more to be admired than the strongest and rarest wonder that ever happened. I have therefore published this little book wrote by* Aristotle, *and the deepest philosophers, who teach the use of all parts of the body, their nature, quality, property, and substance, and question not but it will afford both innocent, necessary and useful knowledge, and prove profitable to both sexes.*

Ariſtotle's Problems.

AMONG all living creatures, why hath man only his countenance lifted up towards heaven ?

Unto this queſtion there are divers anſwers.

1ſt, It proceeds from the will of the Creator. And although the anſwer be true, yet it ſeemeth not to be of force, becauſe that ſo all queſtions might be eaſily reſolved.

2dly, I anſwer, that, for the moſt part, every workman doth make his firſt work worſe, and then his ſecond better, ſo God created all beaſts before man, gave them their face looking down on the earth, and then, he created man, as it doth appear in Geneſis, unto whom he gave an upright ſhape, lifted into heaven, becauſe it is drawn from divinity, but this derogates from the goodneſs of God, who maketh all his works perfect and good.

3dly, It is anſwered, that man only, among all living creatures, is ordained to the kingdom of heaven, and therefore hath his face elevated and lifted up to heaven, becauſe that deſpiſing worldly and earthly things he ought to contemplate on heavenly things.

4thly, That the reaſonable ſoul is like unto angels, and finally ordained to enjoy God, as appears by Averrois *de anima* and therefore he hath a figure looking upwards.

5thly, That man is a microcoſm, that it is a little world, as Ariſtotle ſaith, and therefore he doth command all other living creatures and they obey him.

6thly, It anſwered, that naturally, there is given unto every thing, and every work, that form and figure which is fit and proper for its motion : as, unto the heaven roundneſs, to the fire a pyramidical form that is, broad beneath, and ſharp towards the top, which form is moſt apt to aſcend : and ſo man has his face up to heaven, to behold the wonders of God's works.

Why is the head of beaſt's hairy ?

The anſwer, according to the opinion of Conſt. is, that the hairs are the ornament of the head and of the brain, and the brain is purged and evacuated of groſs humours by the growing of the hair, from the higheſt unto the loweſt parts, which paſs through the pores of the exterior fleſh and do become dry, and are converted into hairs. This appears to be true, becauſe that in all the body of man there is nothing drier than the hairs ; for they are drier than the bones, as Albetus Magnus doth affirm, becauſe that ſome beaſts are nouriſhed with bones, but no beaſt can digeſt feathers or hair, but do avoid them undigeſted ; they being too hot for nutriment.

2dly, It is anſwered, that the brain is purged four manner of ways ; of ſuperfluous watery humours by the eyes, from melancholy by the ears, of choler by the noſe, and of phlegm by the hair, and that is the intent of the phyſician.

Why have men longer hair on their heads than other living creatures ?

Ariſt. *de generat. anim.* ſays Men have the moiſteſt brain of all living creatures, from which the ſeed proceedeth, which is converted into the long hair of the head.

2dly, It is anſwered that the humours of man are fat, and do not become eaſily dry, and therefore the hair groweth longer in man than in beaſts, whoſe humours eaſily dry.

Why doth the hair take deeper root in Man's ſkin than in any other living creatures?

Becauſe they have greater ſtore of nouriſhment in man, and therefore grow more into the inward parts of man—And this is alſo the reaſon why in other creatures the hair doth alter and change with the ſkin, and not in man, unleſs it be ſometimes a ſcar or wound.

Why have women longer hair than men?

1ſt, Becauſe women are moiſter than men, and phlegmatic, and therefore there is more matter of hair in them; and furthermore, this matter is more increaſed in women than in men from their interior parts, and eſpecially in the time of their monthly terms, becauſe the matter doth then aſcend, whereby the humour which breedeth the hair doth increaſe. And Albertus ſays, that if the hair of a woman, in the time of their flowers be put into dung, a venomous ſerpent is engendered of it.

2dly, Becauſe women want beards, and ſo the matter of the beard doth go into the matter of the hair.

Why have ſome men ſoft hair and ſome hard?

We anſwer, with Ariſtotle, that the hair hath proportion with the ſkin, of which ſome is hard, ſome thick and groſs, ſome ſubtle and ſoft; therefore the hair which groweth out of a thick and groſs ſkin, is thick and groſs, and that, which groweth out of a ſubtle and ſoft ſkin, is fine and ſoft. When the pores are open, much humour cometh forth, which engenders hard hair; but when the pores are ſtrait, then there groweth ſoft and fine hair. Ariſtotle ſhews, that women have ſofter hair than men, becauſe their pores are more ſhut and ſtrait, by reaſon of their coldneſs.

2dly, Becauſe that, for the moſt part, choleric men, have harder and thicker hair than others, by reaſon of their heat, and their pores being for ever open, and therefore they have beards ſooner than others. Ariſtotle giveth example in the bear and boar, which have hard hair, proceeding of heat and choler, which makes them bold; and contrawiſe, thoſe beaſts that have ſoft hair, as the hart and hair, are fearful, becauſe they be cold. Another reaſon of the ſoftneſs and hardneſs of the hair, is drawn from the climate where a man is born; becauſe that in hot regions hard and groſs hair is engendered, as in the Ethiopians; and the contrary is true in cold countries.

Why have ſome men curled hair and ſome ſmooth?

The anſwer is, That the cauſe of the curling of the hair is great abundance of heat in a man, then the hair doth curl and grow upward. A ſign of this is, that ſometimes a man doth enter into a bath ſmoot haired and afterwards becometh curled; and therefore the keepers of baths have often curled hair as alſo the Ethiopians and choleric men: But the cauſe of the ſmoothneſs is the abundance of moiſt humours which tend downwards; and a proof of this, they have much humidity in them and ſmall heat.

Why do women ſhew their ripeneſs by their hair in their privy parts and not elſewhere, but men in their breaſt.

We anſwer, becauſe there is abundance of humidity in that place, but more in women than in men. Men have the mouth of the blad-

der in that place where the urine is contained, of which the hair in the breasts, and about the navel, is entangled; but in women the humidity of the bladder, and of the womb, is joined and meeteth in that low secret place, and is dissolved and separated in that place through much vapours and fumes, which are the cause of hair. And the like doth happen in other places, where hair is, as under the arms.

Why have not Women beards?

Because they want heat as appeareth in some effeminate men, who are beardless for the same cause, because they are of the complexion of a woman.

Why doth the hair grow in them that are hanged?

Because their bodies are exposed to the sun which through its heat dissolves all the moisture into a fume or vapour, of which the hair doth grow.

Why is the hair of the beard thicker and grosser, than elsewhere, and the more men are shaven, the harder and thicker it groweth?

Because according to the rule of the physician, by how much more the humour or vapour of any liquor is dissolved and taken away, by so much more the humour remaining doth draw the same: and therefore by how much the more the hair is shaven so much the humours gather thicken, and of them hair is engendered, and doth there also wax hard.

Why are women more smooth and soft than men?

The answer, according to Aristotle, is, that in women all humidity and superfluity, is expelled with their monthly terms; which superfluity remaineth in men, and through vapours do pass into the hair. And a sign of this is, that in women who have running at the nose, imposthumes, or ulcer, no such matter is expelled. And some women begin to have beards in their old age, after forty or fifty years of age, when their flowers are ceased.

Why doth man only, above all other creatures, wax hoary and grey, as Phythagoras and Aristotle affirm?

The answer, according unto the philosophers, is, because man hath the hottest heart of all living creatures; and therefore nature, lest a man should be suffocated through the heat of his heart, hath placed the heart, which is most hot, under the brain, which is most cold; to the end that the heat of the heart may be tempered with the coldness of the brain, and the coldness of the brain may be heated with the heat of the heart, and thereby there might be a temperature in both. A sign to prove this is, because of all living creatures man hath the worst breath, if he comes to his full age. Furthermore, man doth consume half his time in sleeping, which doth proceed from the great access of the coldness and moisture of the brain, and by that means doth want natural heat to digest and consume that moistness; which heat he hath sufficiently in his youth, and therefore in that age is not grey, but in his old age, when heat falleth; and therefore the vapours ascending from the stomach remain undigested and unconsumed for want of natural heat and then putrifies, of which putrefaction of humours the whiteness doth follow, which is called greyness or hoariness. Whereby it doth appear, that hoariness is nothing else but a whiteness of the hair, caused by putrefaction of humours about the roots of the hair, through the natural want of heat in old age. Sometimes also greyness is caused by the naughtiness of complexion, which may

well happen in youth, and sometimes by reason of the moisture undigested and sometimes through over great fear and care, as appeareth in merchants, sailors, thieves: from whence cometh this verse.

Cura facit canos, quamvis homo non habet annos.

Why doth red hair grow white sooner than other?

According to the opinion of Aristotle, because redness is an infirmity of the hair, for it is engendered of a weak and infirm matter, that is to say, of matter corrupted with the flowers of the woman, and therefore they wax white sooner than black hair.

Why do wolves grow grisly?

The better to understand this question note the difference between greyness and grisling: because that greyness is caused through the defect of natural heat, but grislines through devouring and eating, as Aristotle witnesseth, lib. 7. *de animal.* The wolf being a devouring beast, and an eater, he letteth it down gluttonously without chewing, and that at once enough for three days, by which means gross vapours are engendered in the wolf's body, and by consequence grislines. Secondly, greyness and grislines do differ, because greyness is only on the head, and grislines over all the body.

Why do horses grow grisly and grey?

According to Aristotle, because they are for the most part in the sun: and in his opinion also, heat doth accidentally cause putrefaction; and therefore that kind of heat doth putrefy the matter of hair, and by consequence they are quickly pilled.

Why do men become bald, and trees fall their leaves in the winter.

Aristotle doth give the same reason for both; because that the want of moisture in both is the cause of the want of the hair and of the leaves; and this is proved because that a man becometh bald, through venery, for that is letting forth of natural humidity and heat. And so by that excess in carnal pleasure, moisture is consumed, which is the nutriment of the hair, and therefore baldness doth ensue. And this is evidently proved in eunuchs and women who do not grow bald, because they do not depart from their moistness; and therefore eunuchs are of the complexion of women. But if you ask why eunuchs be not bald, nor have the gout, as Hypocrates saith, the answer is according to Galen, because the cause of baldness is dryness, the which is not in eunuchs, because they want their stones, the which do minister heat into all the parts of the body, and the heat does open the pores, which being open, the hair doth fall.

Why are not women bald?

Because they are cold and moist, which are the causes that the hair remaineth; for moistness doth give nutriment to the hair and coldness doth bind the pores.

Why are bald men deceitful, according to the verse?

Si non vis falli, fugias consortia calvi.

Because baldness doth withness a choleric complexion, which is hot and dry: and choleric men are naturally deceitful, according to the verse.

Hirsutus, fallax, irascens prodigus, audax.

And therefore it followeth, *a primum ad ultimum*, that bald men are deceitful and crafty.

Why are not blind men naturally bald?

Because that, according to Aristotle, the eye hath most moisture in it,

and that moiſture which ſhould paſs through by the ſubſtance of the eyes, doth become a ſufficient nutriment of the hair, and therefore they are ſeldom bald.

Why doth hair ſtand on end when men are afraid?

Becauſe in the time of fear the heat doth go from the outward part of the body into the inward, to the intent to help the heart, and ſo the pores in which the hairs are faſtened, is ſhut up; after which ſtopping and ſhutting up of the pores, the ſtanding up of the hair doth follow, as it is ſeen in beaſts, as dogs, wild boars, and peacocks.

Of the HEAD.

Why is a man's head round?

Becauſe this is moſt fit to receive any thing into it, as Ariſtotle doth affirm, *Lib. de Caſ.* and the head doth contain in it five ſenſes. This is alſo ſeen in a material ſphere.

Why is the head round?

Ariſtotle ſaith, becauſe it doth contain in it the moiſteſt part of the living creatures, and alſo, becauſe the brain may be defended thereby as with a ſhield.

Why is the head abſolutely long but ſomewhat round?

To the end the three creeks and cells of the brain might the better be diſtinguiſhed; that is, the fancy in the forehead, the diſcourſing or reaſonable part in the middle, and the memory in the hindermoſt part.

Why doth a man lift up his head towards the heavens when he doth imagine.

Becauſe the imagination is in the fore part of the head or brain, and therefore it lifteth up itſelf, that the creeks or cells of the imagination, may be opened, and that the ſpirits which help the imagination, and are fit for that purpoſe, having their concourſe thither may help the imagination.

Why doth a man when he muſeth, or thinketh on things paſt, look down towards the earth?

Becauſe the cell or creek which is behind, is the creek or chamber of memory, and therefore that looketh towards heaven when the head is bowed down; and ſo that cell is open, to the end that the ſpirits which perfect the memory ſhould enter in.

Why is not the head fleſhy, like unto the other parts of the body.

Becauſe that, according to Ariſtotle, the head would be too heavy, and would not ſtand ſtedfaſtly; and therefore it is without fleſh. Alſo a head loaded with fleſh doth betoken an evil complexion.

Why is the head ſubject to aches and griefs.

According to Conſtant, by reaſon of evil humeurs which proceed from the ſtomach, aſcend up to the head and diſturb the brain, and ſo cauſe the pain in the head. And ſometimes it proceeds from over-much filling the ſtomach, becauſe, according to the opinion of Galen, two great ſinews paſs from the brain to the mouth of the ſtomach and therefore theſe two parts do ſuffer grief alway together. Sometimes the ach doth proceed of drinking ſtrong wine, of fuming meats, as garlick or onions, and ſometimes of phlegm in the ſtomach, whereof ſpring quotidian fevers.

Why have the women the headach more than men?

Albertus ſaith, it is by reaſon of their monthly terms, which men are not troubled with, and ſo a moiſt, unclean and vanemous fume is

diffolved, the which feeking paſſage upward, doth cauſe the headach.

Why is the brain white?

There are two anſwers; the firſt becauſe it is cold, and coldneſs is the mother of white: the philoſophers do teach the ſecond, becauſe it may receive the ſimilitude and likeneſs of all colours, which the white colour can beſt do, becauſe it is moſt ſimple.

Why are all the ſenſes in the head?

Becauſe, as Albertus ſaith, the brain is there, on which all the ſenſes do depend, and are directed by it, and by conſequence it maketh all the ſpirits to feel, and by it all the membranes are governed.

Why cannot a man eſcape death if the brain or heart be hurt?

Becauſe the heart and brain are two of the moſt principal parts which concern life: and therefore if they be hurt there is no remedy left for the cure.

Why is the brain moiſt?

Becauſe it may eaſily receive an impreſſion, which moiſture can beſt do, as it appeareth in wax, which doth eaſily receive the print of the ſeal when it is ſoft.

Why is the brain cold?

This is anſwered two ways; firſt, becauſe that by this coldneſs it may clear the underſtanding of a man, and make it ſubtile. Secondly, that by the coldneſs of the brain the heat of the heart may be tempered.

Of the Eyes.

Why have you but one noſe and two eyes?

Becauſe our light is more neceſſary for us than the ſmelling. And therefore it doth proceed from the goodneſs of nature, that if we receive any hurt or loſs of one eye, that yet there ſhould one remain: unto which the ſpirit with which we ſee, called Spiritus Viſus, is directed when the other is out.

Why have children in their youth great eyes, and why do they become ſmaller and laſſer in their age?

According to Ariſtotle *de generat.* It proceedeth from the want of fire, and from the aſſembling and meeting together of light and humour; the eyes are lightened by reaſon of the ſun, which doth lighten the eaſy humour of the eye, and purge it, and in the abſence of the ſun thoſe humours become dark and black, and therefore the ſight is not ſo good.

Why doth the bluiſh grey eye ſee badly in the day time, and well in the night?

Becauſe ſaith Ariſtotle, greyneſs is light and ſhining of itſelf, and the ſpirits with which we ſee are weakened in the day time, and ſtrengthened in the night.

Why be men's eyes of divers colours?

This proceedeth, ſaith Ariſtotle, by reaſon of the diverſity of the humours: the eye therefore hath four coverings and three humours: the firſt covering is called conſolidative, which is the outermoſt, and ſtrong and fat. The ſecond is a horney ſkin and covering to the likeneſs of an horn, and that is a clear covering. The third is called Uvea, of the likeneſs of a black grape. The fourth is called a cobweb. But according to the opinion of ſome, the eye doth conſiſt of ſeven coverings or ſkins, and three humours. The firſt humour is called abungines for the likeneſs unto the white of an egg. The ſecond glacial, that is clear like unto ice or chriſtalline. The third vitreous that is

clear as glass. And the diversity of humour causeth the diversity of the eyes.

Why are men who have but one eye good archers? and why do good archers commonly shut one eye? and why do such as behold the stars look through a trunk with one eye?

This matter is handled in the perspective arts, and the reason is, as it doth appear in the book of Causes, because that every virtue and strength united knit together, is stronger than itself dispersed and scattered. Therefore all the force of seeing dispersed in two eyes, the one being shut, is gathered into the other, and so the light is fortified in him, and by consequence he doth see better and more certainly with one eye being shut, than both open.

Why do such as drink much, and laugh much, shed much tears?

Because that whilst they drink and laugh without measure, the air which is drawn in, doth not pass out through the windpipe, and so with force is directed and sent to the eyes, and by their pores passing out doth expel the humours of the eyes, the which humours being so expulsed do bring tears.

Why do such as weep much, urine but little?

Because, saith Aristotle, the radical humidity of a tear and of urine are one and the same nature; and therefore, where weeping doth increase, urine doth diminish; and that they be of one nature, is plain to the taste, because they are both salt.

Why do some that have clear eyes see nothing at all?

By reason of the opulation and naughtiness of the sinews that which we see; for the temples being destroyed, the strength of the light cannot be carried from the brain to the eye, as philosophers teach, *lib. de sen. & sentio.*

Why is the eye clear and smooth like unto a glass?

Because the things which may be seen are better beaten back from a smooth thing than otherwise.

Secondly, I answer, it is because the eye is very moist above all parts of the body and of a watérish nature; and as the water is clear and smooth, so likewise is the eye.

Why do men who have their eyes deep in their head see well afar off and the like in beasts?

Because saith Aristotle (2d. *de Gener. Animal.*) the force and power by which we see is dispersed in them, and go directly to the thing which is seen. And this is proved by a similitude, because that when a man doth stand in a deep ditch or well, he doth see in the day time, standing in those places, the stars of the firmament; as Aristotle doth teach in his treatise, *De Forma Specula*; because that then the power of the sight and of the beams are not scattered.

Wherefore do those men who have their eyes far out, and not deep in their head, see but nearly and not far distant?

Because, saith Aristotle, the beams of the sight which pass from the eye are scattered on every side, and go directly unto the thing that is seen, and therefore the sight is weakened.

Why are many beasts born blind, as lions' whelps and dogs' whelps?

Because such beasts are not yet of perfect ripeness and maturity, and the cause of nutriment doth not work in them. And this is proved by a similitude of the swallow, whose eyes, if they were taken out when they are littl ones in the nest, would grow again: and this is plain in many other

beasts, which are brought forth before their time, as it were dead, as bears' whelps. And this reason doth belong rather to the perspective than the natural philosopher.

Why do the eyes of a woman that hath her flowers stain a new glass, as Aristotle saith, de somno et Virgil, *and this is like the problem, why doth a basilisk kill a man with his eyes?*

To the first I answer, that when the flowers do run from a woman, then a most venomous air is dissolved in them, which doth ascend unto the woman's head; and she having grief of her head, doth cover it with many veils and kerchiefs; and because the eyes are full of small insensible holes, which are called pores, there the air seeketh a passage, and so doth infect the eyes, which are full of blood, and their eyes do appear also drooping and full of tears, by reason of the evil vapours that are in them, and those vapours are incorporated; and multiplied, until they come into the glass before them, and by reason that such a glass is found, clear and smooth it doth easily receive that which is unclean.

To the second it is answered, that the basilisk is a very venomous and infected beast, and that there pass from his eyes venomous vapours, which are multiplied upon the thing which is seen by him, and even unto the eye of man; the which venomous vapours or humours entering into the body do infect him, and so in the end the man dieth. And this is also the reason why the basilisk looking upon a shield perfectly well made with fast clammy pitch, or hard smooth thing, doth kill himself, because the humours are beaten back from the smooth, hard thing, unto the basilisk, by which beating back he is killed. And the like is said of a woman when she hath her monthly disease, whereof it followeth, that some old women do hurt themselves when they look upon glasses, or other firm and solid things, in the time of their terms.

Why are not sparkling cats' eyes and wolves' eyes seen in the light and not in the dark?

Because that the greater light doth darken the lesser, and therefore in a greater light the sparkling cannot be seen, but the greater the darkness, the easier it is seen, and is made more strong and shining, because it is not then hindered by a greater external light, which might darken it.

Why doth a man beholding himself in a glass presently forget his own disposition?

Answer is made in Lib. de forma speculi, that the image seen by the glass doth represent it weakly and indirectly, to the power of the sight; and because it is represented weakly, it is also weakly apprehended, and by consequence is no longer retained.

Why is the sight recreated and refreshed by a green colour as this verse sheweth?

Fens, speculum gramen oculis sunt aleviamen.

Because the green colour doth meanly move the instrument of sight and therefore doth comfort the sight; but this doth not black nor white colours, because the colours do vehemently stir and altar the organ and instrument of the light, and therefore make the greater violence, but by how much more violent the thing is which is felt or seen the more it doth destroy and weaken the sense, as Aristotle doth teach, *Lib.* 2. *de animal.*

Of the Nose.

Why doth the nose stand out farther than other parts of the body?

There are two answers: the first, because the nose is as it were the sink

of the brain, by which the phlegm of the brain is purged, and therefore it doth ſtand forth, leſt the other parts ſhould be defiled: the ſecond (according to Conſtant.) is, becauſe the noſe is the beauty of the face, and therefore, it doth ſhew itſelf and ſhine. It doth ſmell alſo and adorn the face, as Boetus ſaith, *de deſcip. ſchol.*

Why hath man the worſt ſmell of all living creatures, as it doth appear, Lib de Animal?

Becauſe the man (as the commentator ſaith) in reſpect of his quality hath the moſt brain of all creatures: and therefore by that exceeding coldneſs and moiſtneſs the brain wanteth a good diſpoſition, and by conſequence the ſmelling inſtrument is not good, as Ariſtotle and Themiſtocles do teach; yea, ſome men there be who do not ſmell at all.

Why doth the vulture or cormorant ſmell very well, as the commentator doth ſay?

Becauſe they have a very dry brain, and therefore the air carrying the ſmell, is not hindered by the humidity of the brain, but doth preſently touch its inſtrument; and therefore he ſaith, that the vultures, tygers, and other beaſts, came five hundred miles to the dead bodies after a battle in Greece.

Why did nature make noſtrils?

For three commodities. Firſt, becauſe that the mouth being ſhut, we draw breath in by the noſtrils to refreſh the heart with. The ſecond commodity is, becauſe that the air which proceedeth from the mouth doth ſavour badly, becauſe of the vapours which riſe from the ſtomach, but that which we breathe from the noſe is not noiſome. The third is, becauſe the phlegm which doth proceed from the brain is purged by them.

Why do men ſneeze?

Becauſe that the expulſive virtue of power and the ſight ſhould thereby be purged, and the brain alſo from ſuperfluities, becauſe that as the lungs are purged by coughing, ſo is the ſight and brain by ſneezing: and thoſe who ſneeze often are ſaid to have a ſtrong brain; and therefore the phyſicians give ſneezing medicaments to purge the brain, and ſuch ſick perſons as cannot ſneeze die quickly, becauſe it is a ſign their brain is wholly ſtuffed with evil humours, which cannot be purged.

Why do ſuch as apoplectic not ſneeze; that is, ſuch as are ſubject to bleed?

Becauſe the paſſages or ventricles of the brain are ſtopped in them; and if they could ſneeze, their apoplexy would be looſed.

Why doth the heat of the ſun provoke ſneezing, and not the heat of fire?

Becauſe the heat of the ſun doth diſſolve and not conſume; and therefore the vapour diſſolved is expelled by ſneezing; but the heat of the fire doth diſſolve and conſume, and therefore rather doth hinder ſneezing than provoke.

Of the EARS.

Why do beaſts move their ears and not men?

Becauſe there is a certain muſcle near unto the jaw which doth cauſe motion in the ear; and therefore that muſcle being extended and ſtretched, men do not move their ears, as it hath been ſeen in divers men, but all beaſts do uſe that muſcle or fleſhy ſinew, and therefore do move their ears.

Why is rain prognoſticated by the pricking up of aſſes ears?

Becauſe the aſs is a very melancholly beaſt, and it proceedeth from melancholly that he doth foreſee rain to come. In the time of rain, all beaſts

do prick up their ears, and therefore the aſs perceiving that it will rain, doth prick up his ears before it come.

Why have ſome beaſts no ears?

Ariſtotle doth anſwer and ſay, that nature doth give unto every thing that which is fit for it; but if ſhe ſhould have given birds ears, their flying would have been hindered by them: likewiſe fiſh do not want ears, becauſe they would hinder their ſwimming, and have only certain little holes through which they hear, as Ariſtotle declares by the ſea-calf.

Why have bats ears, ſeeing they ſeem to be birds?

Becauſe they are partly birds in nature, in that they do fly, by reaſon whereof they have wings; and partly they are hairy, becauſe they are mice, t herefore nature has being wiſe gave them ears.

Why have men only round ears?

Becauſe the ſhape of the whole and of the parts ſhould be proportionable, and eſpecially in all things of one nature: for, as a drop of water is round, ſo the whole water, John de ſacro Boſco doth prove; and ſo becauſe a man's head is round, the ears incline towards the ſame figure: but the heads of beaſts are ſomewhat long, and ſo the ears are drawn into length alſo.

Why did nature give living creatures ears?

For two cauſes: 1. Becauſe with them they ſhould hear. 2. Becauſe that by the ear choleric ſuperfluity is purged; for, as the head is purged of phlegmatic ſuperfluity by the noſe, ſo from choleric by the ears.

Of the Mouth.

Why hath the mouth lips to compaſs it?

According to the Conſt. becauſe the lips do cover and defend the teeth, it were unſeemly that the teeth ſhould always be ſeen. Another anſwer is, that the teeth are of a cold nature, and would therefore be ſoon hurt if they were not covered with lips. Another moral reaſon is, becauſe a man ſhould not be to haſty of ſpeech.

Why hath a man two eyes, two ears and but one mouth?

Becauſe a man ſhould ſpeak but little, and hear and ſee much. And withal, Ariſtotle doth ſay, that the hearing and the ſight doth ſhew us the difference of many things; and Seneca doth agree unto this, affirming that nature environed the tongue with a double cloiſter, and teeth, and lips, and has made the ears open and wide, and has given us but one mouth to ſpeak but little, though we hear much.

Why hath a man a mouth?

For many commodities: 1. Becauſe the mouth is the gate and door of the ſtomach. 2. Becauſe the meat is chewed in the mouth, and prepared and made ready for the firſt digeſtion, although Avicen. doth hold that digeſtion is made in the mouth. 3. Becauſe that the air drawn into the hollow of the mouth for the refreſhing of the heart, made more pure and ſubtile. And for many other cauſes which hereafter ſhall appear.

Why are the lips moveable?

Becauſe of forming the voice and words, which cannot be perfectly done without them. For as without *a*, *b*, *c*, there is no writing: ſo without the lips no voice can be well formed.

Why do men gape?

The gloſs upon the laſt part of Hippocrates' Aphoriſms ſaith, that it proceeds of wearineſs, as when a man ſitteth among ſuch as he doth not know, whoſe company he would willingly be rid of. Beſides, gaping is cauſed of the thick fume and vapours which fill the jaws, by the expul-

ſion of which is cauſed the ſtretching out and expulſion of the jaws, and opening of the mouth, which is called gaping.

Why doth a man gape when he ſeeth another gape?

This proceedeth of imagination. And this is proved by a ſimilitude, for an aſs is an animal void of ſenſe, by reaſon of his melancholy, becauſe he doth retain his ſuperfluity a long time, and would neither eat nor piſs, unleſs he ſhould hear another piſs; and ſo a man gapes thro' imagination when another man doth gape.

Of the TEETH.

Why have they only, among all other bones, the ſenſe of feeling?

Becauſe, as Avicen, and Galen ſay, they diſcern heat and cold which hurt them, which other bones need not.

Why have men more teeth than women?

By reaſon of the abundance of heat and blood, which is more in men than in women.

Why do the teeth grow to the end of our life, and not the other bones?

Becauſe otherwiſe they would be conſumed with chewing and grinding.

Why do the teeth only come again when they fall, or be taken out, and other bones taken away grow no more?

Becauſe that according to Ariſtotle, all other bones are engendered of the humidity which is called radical, and ſo they breed in the womb of the mother, but the teeth are engendered of nutritive humidity, which is renewed and increaſed from day to day.

Why are the fore teeth ſharp and the cheek teeth broad?

This proceedeth of the defect of matter, and of the figure, becauſe the fore teeth are ſharp, and the others broad. But, according to Ariſtotle, there is another anſwer; that is, that it is the office of the fore teeth to cut the meat, and therefore they are ſharp; and the office of the other to chew the meat and therefore they are broad in faſhion, which is fit for that purpoſe.

Why do the fore teeth grow ſooneſt?

Becauſe we want them ſooner in cutting than the other in chewing.

Why do teeth of human creatures grow black in old age?

This proceedeth of the corruption of meat, and the corruption of phlegm, with a naughty choleric humour.

Why are colts' teeth yellow, and of the colour of ſaffron when they are young and grow white when they are old?

Ariſtotle ſaith, that a horſe hath abundance of watery humours in him, which in his youth are digeſted and converted into groſſneſs; but in old age heat is diminiſhed, and the watery humours remain, whoſe proper colour is white.

Why did nature give living creatures teeth?

Ariſtotle ſaith (*Lib. de Generat. Animal.*) to ſome to fight with, for the defence of their lives, as unto wolves and bears; unto ſome to eat with, as unto horſes; unto ſome for the forming of their voice, as unto men, as it appeareth by the commentary in the book *de Animal.*

Why do horn beaſts want their upper cheek teeth?

According to Ariſtotle, in his book *de Animal.* horns and teeth are cauſed of the ſelf ſame matter, that is of nutrimental humidity, and therefore the matter which paſſeth into horns turneth not into teeth, conſequently they want the upper teeth. And ſuch beaſts according to Ariſtotle, cannot chew well; whereupon for want of teeth, they have two ſtomachs

by conſequence, and ſo to chew their meat twice: and they do firſt convey their meat into the ſtomach or belly, and then return it from whence it came, and chew it.

Why are ſome creatures brought forth with teeth, as kids and lambs, and ſome without them, as men?

Nature doth not want in things neceſſary, nor abound in things ſuperfluous; and therefore, becauſe theſe beaſts not long after they be fallen, do need teeth; but men are nouriſhed with their mother's dugs for a time, and therefore, for a time, do not need teeth.

Why have not birds teeth?

Becauſe the matter of teeth paſſeth into their beak, and therefore there is their digeſtion: or elſe it is anſwered, that although they do not chew with teeth, yet their head in digeſtion doth ſupply the want of teeth.

Of the TONGUE.

Why is the tongue full of pores?

According to Ariſtotle *de Animal.* Becauſe the tongue is the means whereby we taſte; and through the mouth in the pores of the tongue, the taſte doth come into the ſenſe of taſting. Otherwiſe, it is anſwered, that frothy ſpittle is ſent into the mouth by the tongue from the lungs, moiſtening the meat, and making it ready for the firſt digeſtion; and therefore the tongue is full of pores, becauſe many have paſſage through it.

Why doth the tongue of ſuch as are ſick of agues judge all things bitter?

Becauſe the ſtomach of ſuch perſons is filled with choleric humours, and choler is very bitter, as it appeareth by the gall, and therefore this bitter fume doth infect their tongue, and ſo the tongue being full of theſe taſtes, doth judge them bitter, although the fault be not in the meat.

Why doth the tongue water when we hear ſour and ſharp things named?

Becauſe the imaginative virtue or power is of greater force than the power and faculty of taſting: and when we imagine a taſte, we conceive it by the power of taſting as by a mean, becauſe there is nothing felt by the taſte; but by means of that ſpittle the tongue doth water.

Why do ſome ſtammer and liſp?

This happeneth from many cauſes, ſometimes through the moiſtneſs of the tongue and brain, as in children, which cannot ſpeak plainly nor pronounce many letters. Sometimes it happeneth by reaſon of the ſhrinking of certain ſinews, which are corrupted with phlegm; for ſuch ſinews there be which go to the tongue.

Why are the tongues of ſerpents, and mad dogs venomous?

Becauſe of the malignity and tumoſity of the venomous humour which doth predominate in them.

Why is a dog's tongue fit and apt for medicine, and contrarywiſe an horſe's tongue peſtiferous?

'Tis by reaſon of ſome ſecret property, or elſe it may be ſaid the tongue of a dog is full of pores, and ſo doth draw and take away the viſcoſity of the wound. Some ſay that a dog hath by nature ſome humour in his tongue, with the which by licking he doth heal; the contrary is in a horſe.

Why is the ſpittle white?

By reaſon of the continual moving of the tongue whereof heat is engendered, which makes this ſuperfluity white, as is ſeen in the froth of water.

Why is the ſpittle unſavoury and without taſte?

If it had a certain determinate taſte, then the tongue would not taſte

at all, but would only have the taſte of ſpittle, and ſo could not receive other taſtes.

Why doth the ſpittle of one that is faſting heal an impoſthume?

Becauſe according to Avicen, it is well digeſted and made ſubtle.

Why do ſome abound in ſpittle more than others?

This proceedeth of a phlegmatic complexion, which doth predominate in them, and therefore the phyſician, ſay, that ſuch ſhould take care of a quotidian ague, which ariſeth from the predominacy of phlegm: the contrary is, in thoſe that ſpit little, becauſe, heat abounds in them, which conſumes the humidity of the ſpittle; and ſo the defect of ſpittle is a ſign of a fever.

Why is the ſpittle of a man that is faſting more ſubtle than one who is full?

Becauſe that the ſpittle is without the viſcoſity of meat, which is wont to make the ſpittle of one who is full, groſs and thick.

From whence proceedeth the ſpittle of man?

From the froth of the lungs, which according to the phyſicians are the ſeat of phlegm.

Why are ſuch beaſts as often go together for generation very full of foam and froth?

Becauſe that then the lights and the heart are in great motion of luſt, therefore there is engendered in them much frothy matter.

Why have not birds ſpittle?

Becauſe they have very dry lungs, according to Ariſtotle, in his fifth book *de Animal.*

Why do ſuch as are called Epileptic, that is, ſuch as are overwhelmed and as it were drowned in their own blood, and are diſeaſed, ſavour badly and corruptly?

The anſwer, according to the phyſicians, is, becauſe the peccant matter lieth in the head; but if he do vomit, then the matter is in the ſtomach; but if he piſs much, then the matter is in the paſſage of the urine; but if he begin to have ſeed, then it is in the veſſels of the ſeed, and according to the phyſicians do purge them.

Why doth the tongue loſe ſometimes the uſe of ſpeaking?

The anſwer is out of Hippocrates. That this doth happen through a palſy or apoplexy, that is, a ſudden effuſion of blood and of a groſs humour and ſometimes alſo by infection of *ſpiritus animalis* in the middle of the brain, which hinders the ſpirits from being carried to the tongue; and ſo is Galen's meaning, for, by the expreſſion of the tongue many actions of divers perſons are made manifeſt.

Of the Roof of the Mouth.

Why are fruits, before they are ripe, of a naughty reliſh or bitter, and after ſweet?

A naughty reliſh in taſte proceedeth of coldneſs, and want of heat in groſs and thick humidity; but a ſweet taſte proceedeth of ſufficient heat, and therefore in the ripe fruit the humidity is ſubtle through the heat of the ſun, and ſuch fruits are commonly ſweet; but before they be ripe, and humidity is groſs or ſubtle for want of heat, the fruit is bitter and ſour.

Why are we better delighted with ſweet taſtes than with bitter or any other?

Becauſe nature is delighted with ſweetneſs: the reaſon is becauſe a ſweet thing is hot and moiſt; and though the heat doth diſſolve and conſume ſuperfluous humidities, and by this humidity, immundicity

is washed away, but a sharp eager taste, by reason of the cold which predominates in it, doth blind overmuch, and prick and offend the parts of the body in purging and therefore we do not delight in that taste because the physicians counsel us to eat nothing that is bitter, in the summer nor in a great heat; and the reason is, because bitterness doth breed heat, but we should eat bitter things in winter only; and therefore Aristotle doth say, that sweet things are grateful unto nature, and do greatly nourish.

Why doth a sharp taste as of vinegar provoke appetite, rather than any other?

Because it is cold, and doth cool. Now it is the nature of cold to desire and draw, and therefore is cause of appetite, Mark, that there are nine kinds of tastes, three of which proceed from heat, three from cold, and three from a temperate mean.

Why do we draw in more air than we breathe out?

Aristotle and Albertus in his book *De Montu Cordis*, do answer, that much air is drawn in, and so converted into nutriment, which together with the vital spirit is contained in the lungs. Wherefore a beast is not suffocated so long as he receives air with the lungs, in which some part of the air remaineth also.

Why doth the air seem to be expelled and put forth, seeing that indeed the air is invisible, by reason of its variety and thinness?

Because the air which is received in us is mingled with vapours and fumosity of the heart by reason whereof it is made thick, and so is seen, and this is proved by experience, because that in winter, we see our breath, for the coldness of air doth bind the breath mixed with fumosities, and so it is thickened and made gross, and by consequence is seen.

Why have some men stinking breath?

The reason is, according to the physicians, because there rise evil fumes from the stomach; and sometimes it doth proceed from the corruption of the airy parts of the body, as of the lungs. And the breath of lepers is so infected, that it doth poison the birds that are near them, because the inwards parts are very corrupt, as appears by *Const. de Sin.* Now the leprosy is a nourishment of all the parts of the body, together with a corrupting of them: and it doth begin in the blood, and exterior members of the body.

Why are lepers hoarse?

Because that in them the instruments vocal are corrupted, that is the lights.

Why do men become hoarse?

Because of the rheum descending from the brain filling the conduit of the lights; or sometimes through some imposthumes of the throat, or rheum gathering in the neck.

Why have females of all living creatures the shrillest voice, a crow only excepted, and a woman shriller than a man, and a smaller?

According to Aristotle, by reason of the composition of the veins, the vocal arteries of voice is formed, as appears by a similitude, because a small pipe sounds shriller than a great. And also in women, because the passage where the voice is formed is made narrow and straight, by reason of cold, it being the nature of cold to bind; but in men the passage is open and wider through heat, because it is the property of heat to open and dissolve. It proceedeth in women

through the moiſtneſs of the lungs and weakneſs of the heat. Young men and diſeaſed have ſharp and ſhrill voices for the ſame cauſe. And this is the natural cauſe why a man child at his birth doth cry *a. i.* which is a bigger ſound, and the female *e*, which is a ſlender ſound.

Why doth the voice change in men and women; in men at 14, *in women at* 12; *in men when they begin to yield their ſeed; in women when their breaſts begin to grow?*

Becauſe then, ſaith Ariſtotle the beginning of the voice is ſlackened and looſened; and he proves this by a ſimilitude of a ſtring of an inſtrument let down or looſed, which gives a great ſound. He proves it another way, becauſe creatures that are gelded, as eunuchs, capos, &c. have ſofter and more ſlender voices than others by reaſon they want ſtones.

Why is not a wolf hoarſe when a man looks on him?

Becauſe a man is not ſo cold as a wolf, nor of ſo malignant a quality.

Why doth a man who is ſlain bleed when he is ſeen of him who killed him?

This proceedeth of divine cauſe, and not of natural, becauſe his blood calleth for vengeance againſt the murderer: but if there be any natural cauſe of it, 'tis this: the committer of this wicked fact calling it to mind, is very ſorry for it, repents him of it, is in anguiſh of mind, and in a great heat through the imagination he hath conceived, and by that means all his ſpirits do ſtir and boil, and repair into the inſtruments of the ſight of the eyes, unto the wounds which are made, which, if they be freſh, do preſently fall a bleeding. Beſides, this is done by the help of the air then breathed in, which being drawn from the wound cauſeth it to bleed.

Why do ſmall birds ſing more and louder than great ones, as appears in the lark and nightingale?

Becauſe the ſpirits of ſmall birds are ſubtle and ſoft, and the organ conduit ſtrait, as appeareth in a pipe, and therefore follow eaſily any note and ſing very ſoft.

Why doth the male ſing more than the female, as appeareth in all living creatures?

It proceedeth from the deſire of carnal copulation, becauſe that then the ſpirits are moved throughout all the body with the aforeſaid appetites and deſire. And generally, ſpeaking, the females are colder than the males.

Why do bees, waſps, flies, locuſts, and many other ſuch like inſects make a noiſe, ſeeing they have no lungs, nor inſtruments of the voice?

According to Ariſtotle, there is, in them a certain ſmall ſkin, which, when the air doth ſtrike, it cauſeth the ſound.

Why do not fiſh make a ſound?

Becauſe they have no lungs, but only gills, nor yet a heart; and therefore they need not the drawing in of the air, and by conſequence they make no noiſe, becauſe that a voice is a pureuſſion of the air which is drawn.

Of the Neck.

Why hath a living creature a neck?

Becauſe the neck is the ſupporter of the head, and therefore the neck is the middle between the head and the body, to the intent that by it, and by its ſinews, as by certain means and ways, motion and ſenſe of the body might be conveyed throughout all the body; and that

by means of the neck, as it were by a distance, the heart, which is very hot, might be seperated from the brain.

Why do some beasts want necks, as serpents and fishes?

Because such beasts want a heart, and therefore they want that distance which we have spoken of; or else we answer, they have a neck in some inward part of them, but it is not distinguished outwardly from the heart to the head.

Why is the neck full of bones and joints?

Because it may bear and sustain the head the stronger, also, before the backbone is joined to the brain in the neck and from thence it receives marrow, which is of the substance of the brain.

Why have some beasts long necks, as cranes, storks, and such like?

Because such beasts do seek their living in the bottom of the water; and some beasts have short necks, as sparrowhawks, &c. because such are ravenous beasts, and therefore for strength, have short necks as appeareth in the ox, which has a short neck, and is therefore strong.

Why is the neck hollow, and especially before and about the tongue?

Because there be two passages, whereof the one doth carry the meat into the nutritive instrument, as to the stomach and liver, and is called of the Greek *Oesephagus*.

Why is the artery made with wrings and circles?

The better to bow, and give a sounding again.

Why doth a chicken move a good space after his head is cut off, and a man beheaded never stirreth?

Because a chicken, and such like, have strait sinews and arteries, and therefore the spirit of moving continueth long after the head is cut off; but men, and many beasts, have long and large sinews and arteries, and therefore the motive spirits do quickly depart from them, and so by consequence cannot move their bodies.

Of the SHOULDERS and ARMS.

Why hath a man shoulders and arms?

To give and carry burdens, and do any manner of work.

Why are his arms round?

For the swifter and spedier work, because that figure is fittest to move.

Why are his arms thick?

Because they should be strong to lift and bear burdens, or thrust and give a strong blow; so their bones are thick, because they contain much marrow, for else they would be easily corrupted and marred; but marrow cannot so well be contained in small bones as in great.

Why do such as are diseased and in grief uncover and cover their arms, and such also as are in agony?

Because such are near unto death: and it is a sign of death by reason of great grief, which causeth that uncovering, as Hippocrates doth teach, *lib. Prognost.*

Why do the arms become small and slender in some sickness, as in madness, and such as are sick of the dropsy?

Because all the parts of the body do suffer the one with the other, and therefore one member being in grief, all the humours do concur and run thither to give succour and help to the aforesaid grief, For, when the head doth ach, all the humours of the arm doth run into the head, and therefore the arms become small and slender, because they want their proper nutriment.

Why have brute beasts no arms?

Their fore feet are instead of arms, and in their place, or else we may answer more fitly, because all beasts have some parts for their defence, and to fight with, as the wolf his feet, the cow her horns, the horse his hinder feet, birds their beak and wings, but only man hath his arms.

Of the HANDS.

For what use hath a man hands, and an ape also, which is likeunto a man?

The hand is an instrument which a man doth especially make use of, because many things are done by the hands, and not by any other part.

Why are some men ambo-dexter, that is, using the left hand as the right?

By reason of the great heat of the heart: for that makes a man as nimble of the left hand as of the right; and without doubt, are of good complexions.

Why are not women ambo dexter as well as men?

Because, as Galen saith, a woman in health that is most hot, is colder than the coldest man in health: I say, in health for, if she have an ague, she is accidentally hotter than a man.

Why are the fingers full of joints?

To be more fit and apt to receive, and keep the things received.

Why hath every finger three joints, and the thumb but two?

The thumb hath three, but the third is joined unto the arm, therefore it is stronger than the other fingers.

Why are the fingers of the right hand nimbler than the fingers of the left, as Agideus saith?

It proceedeth from the heat which doth predominate in those parts, which causeth great agility.

Why are the fingers thicker before meat than after, as Albertus saith?

Because a man who is fasting, is full of bad humours, which puff up the parts of the body, and fingers also; but when the humours are expelled through meat, the fingers become more slender. Add for the same reason, a man who is fasting, is heavier than when he hath meat in his belly, as is most plain in fasters. Another reason may be given, Because that after meat the heat is departed from the outward parts of the body into the inward, to help digestion, and the outward and external parts become slender; but after the digestion is made, the blood turneth again to the exterior parts, and then they become great again.

Why are some men left handed?

Because the heart sendeth out heat into the right side, but more into the left, and doth also work a slenderness and subtility on the left side.

Of the NAILS.

From whence do nails proceed?

Of the fumosity and humours, which are resolved, and go into the extremities of the fingers and they are dried through the power of the external air, and brought to the hardness of a horn.

Why do the nails of old men grow black and pale?

Because the heat of the heart decayeth, which decaying, their beauty decayeth also.

Why are men judged to be of good or evil complexion by the colour of the nails?

Because they give witness of the goodness or badness of the heart,

and therefore of the complexion ; for, if they be ſomewhat red, they betoken choler well tempered ; but if they be yellowiſh or black, they ſignify melancholy.

Why do white ſpots appear in the nails ?

Through a mixture of a phlegm with the nutriment.

Of the Breast.

For what reaſon is the breaſt hollow ?

Becauſe there is the ſeat of the ſpiritual and æriel members, which are moſt noble, as the heart and lights ; and therefore becauſe theſe might be kept from hurt, it was neceſſary that the breaſt ſhould be hollow.

Why hath man the broadeſt breaſt of all living creatures ?

Becauſe the ſpirits of men are weak and ſubtle, and therefore do require a ſpacious place wherein they are contained, as the breaſt is.

Why are the breaſts of beaſts round ?

Becauſe they are in continual motion.

Why have women narrower breaſts than men ?

Becauſe there is more heat in men, which doth naturally move to the uppermoſt part of them, making thoſe parts great and large, and therefore a great breaſt is a token of courage, as in the lion and bull ; but in women cold predominates, which naturally tends downwards, and therefore women often fall on their backſide, becauſe the hinder parts are groſs and heavy, by reaſon of cold aſcending thither ; but a man commonly falls on his breaſt, by reaſon of its greatneſs and thickneſs.

Of the Paps and Dugs.

Why are paps placed upon the breaſts ?

Becauſe the breaſt is the ſeat of the heart, which is moſt hot, and therefore the paps grow there, to the end that the menſes being conveyed thither, as being near to the heat of the heart, ſhould the ſooner be digeſted, and converted into the matter and ſubſtance of milk.

Why are the paps below the breaſt in beaſts, and above the breaſts in women ?

Becauſe a woman goes upright and has two legs only, and therefore, if her paps ſhould be below her breaſts, they would hinder her going, but beaſts have four feet, and therefore they are not hindered in their going.

Why have not men as great breaſts and paps as women ?

Becauſe a man hath no monthly terms, and therefore hath no veſſel deputed for them.

Which paps are beſt for children to ſuck, great or little ones, or the mean between them both ?

In great ones the heat is diſperſed, and there is no good digeſtion of milk ; but in ſmall ones the power and force is ſtrong, becauſe a virtue united is ſtrongeſt, and by conſequence there is good working and digeſtion of the milk, and therefore, the ſmall are better than the great ones, but yet the mean ones are beſt of all, becauſe every mean, is beſt.

Why do the paps of young women begin to grow about 13 *or* 15 *years of age, as Albertus ſaith ?*

Becauſe then the flowers have no courſe to the teats, by which the young one is nouriſhed, but follow their ordinary courſe, and therefore wax ſoft.

Why hath a woman who is with child of a boy the right pap harder than the left?

Becauſe the male child is conceived in the right ſide of the mother, and therfeore the flowers do run to the right pap, and make it hard.

Why doth it ſhew weakneſs of the child when the milk drop out of the paps before the woman be delivered?

Becauſe the milk is the proper nutriment of the child in the womb of the mother, and therefore, if the milk run out, it is a token that the child is not nouriſhed, and is therefore weak.

Why doth the hardneſs of the paps betoken the health of the child in the womb?

Becauſe the flowers are converted into milk, and that milk doth ſufficiently nouriſh the child, and thereby the ſtrength is ſignified.

Why hath a woman but two paps, and ſome brute beaſts ten or more?

Becauſe for the moſt part, a woman hath but one child, either boy or girl, and therefore one pap is ſufficient, or two; but beaſts have many young ones, and therefore ſo many teats.

Why are womens' paps hard when they be with child, and ſoft at other times?

They ſwell then and are puffed up becauſe the much moiſture which proceeds from the flowers doth run into the paps, which at other ſeaſons remaineth in the womb, and is expelled by the place deputed for that end.

By what means doth the milk of the paps come to the matrix or womb?

According to Hippocrates, becauſe there is a certain knitting and coupling of the pap with the womb, and there are certain veins which the midwives do cut in the time of the birth of the child, and by thoſe veins the milk doth flow in at the navel of the child, and ſo it receives nutriment by the navel. Some ſay the child in the womb is nouriſhed at the mouth, but it is falſe, becauſe that ſo it ſhould void excrements alſo.

Why is it a ſign of a male child in the womb when the milk that runneth out of the woman's breaſt is thick and not much, and a female when it is thin?

Becauſe a woman that goeth with a boy hath great heat in her, which doth perfect the milk, and makes it thicker, but ſuch as go with a girl hath not ſo much heat, and therefore the milk is undigeſted watery, and thin, and will ſwim above the water if it be put into it.

Why is the milk white, ſeeing the flowers are red which it is engendered of?

Becauſe blood which is well purged and concocted becometh white, as appeareth in fleſh, whoſe proper colour is red, and being boiled is white. Another anſwer is, every humour which is engendered of ſuch part of the body, is made like unto that part in colour where it is engendered, as near as it can be, but becauſe the fleſh of the paps is white, therefore the colour of the milk is white.

Why doth a cow give milk more abundantly than other beaſts?

Becauſe ſhe is a great eating beaſt; and where much monthly ſuperfluity is engendered, there is much milk, becauſe it is nothing elſe but that blood purged and tried; and becauſe a cow has much of this monthly blood, ſhe has much milk.

Why is not milk wholeſome?

According to the opinion of Galen it is for divers reaſons: 1ſt, Becauſe it doth curdle in the ſtomach, wherefore an evil breath is bread. But to this Hippocrates gives this remedy, ſaying, if the third part of

it be mingled with running water, then it is not hurtful. 2dly, Becauſe the milk doth four in the ſtomach, and breeds evil humours which infect the breath.

Why is milk bad for ſuch as have the headach?

Becauſe it is eaſily turned into great fumoſities, and hath much terreſtrial ſubſtance in it, which aſcending doth cauſe the headach.

Why is milk fit nutriment for infants?

Becauſe it is a natural and uſual food, and they were nouriſhed by the ſame in the womb.

For what reaſon are the white meats made of a new milked cow good?

Becauſe milk at that time is very ſpungy, and does, as it were purge.

Why is the milk naught for the child, if the woman uſes carnal copulation?

Becauſe in time of carnal copulation, the beſt part of the milk goes to the ſeed veſſels, and to the womb, and the worſt remains in the paps, which doeth hurt to the child.

Why is the milk of brown women better than that of white?

Becauſe brown women are hotter than others, and heat purges the milk.

Why do phyſicians forbid the eating fiſh and milk at the ſame time?

Becauſe they are phlegmatic, and are apt to produce a leproſy.

Why have not birds and fiſh milk and paps?

Becauſe paps would hinder the flight of birds: fiſh alſo have neither paps nor milk, but the females caſt much ſpawn on which the male touches with a ſmall gut, which cauſes their kind to be infinite in ſucceſſion.

Of Backs.

Why have beaſts backs?

For three cauſes; firſt, Becauſe the back ſhould be the way and mein of body, from which all the ſinews of the back-bone are extended and ſpread; as appears in ſuch as are hanged, whoſe ſinews hang whole in the chime or back-bone, when they are in pieces, or without fleſh. 2dly, Becauſe it ſhould be a guard and defence for the ſoft parts of the body, as of the ſtomach, liver, lights, and ſuch like. 3dly, Becauſe it ſhould be the foundation of all the bones, becauſe we ſee other bones, as the ribs, faſtened to the back-bone.

Why hath man above all other creatures a broad back which he can lie upon, which no beaſt can do?

Becauſe a broad back doth anſwer a broad breaſt; if therefore a man ſhould have a ſharp back like unto a beaſt, he would be of an unſeemly ſhape, and therefore it is requiſite that he have a broad back.

Why hath a man that lieth on his back horrible viſions?

Becauſe the paſſage or ſign of the fantaſy is open, which is in the fore part of the brain, and ſo the fantaſy is deſtroyed, and then thoſe viſions follow. Another reaſon is, becauſe when a man lieth on his back, the humours are diſtributed and moved upward where the fantaſy is, which by that means is diſtributed. To lie on the back diſpoſes a man to leproſy, madneſs, and to an incubus or night-mare, which is a paſſion of the heart wherein a man thinks himſelf to be ſtrangled in his ſleep, and ſomething lying heavy on him, which he would put off.

Why hath the back bone ſo many joints or knots called Spondelia by the phyſicians?

For the more eaſy moving and bending of it; and therefore they

ſay amiſs, who ſay, that elephants have no ſuch joints, for without them they could not move.

Why do fiſh die after their back bone is burſt ?

Becauſe in fiſh the back bone is inſtead of the heart. Now, the heart is the firſt thing that lives, and the laſt that dies, and therefore, when the bone is broke, fiſh can live no longer.

Why does a man die ſoon after the marrow is hurt or periſhed ?

Becauſe the marrow proceeds from the brain, which is a principal part of a man : as appears, 1ſt, becauſe the marrow is white like the brain : and 2dly, becauſe it hath a thick ſkin or rind, which that called *nucha* has not, which differs from the marrow, becauſe of two coverings like the brain, called *pta mater*, and *dura mater ?*

Why have ſome men the piles ?

Thoſe men are cold and melancholy, which melancholy firſt paſſes to the ſpleen, its proper ſeat, but there cannot be retained for the abundance of blood ; for which reaſon, it is conveyed to the backbone, where there are certain veins which terminate in the back, and receive the blood ; when thoſe veins are full of the melancholy blood, then the conduits of nature are opened, and the blood iſſues out once a month, like womens' terms. Thoſe men who have this courſe of blood, are kept from many infirmities, as dropſy, plague, &c.

Why are the Jews much ſubject to this diſeaſe ?

Divines ſay, becauſe they cried at the death of Chriſt, "Let his blood be upon us and our children." Another reaſon is, becauſe the Jews eat much phlegmatic and cold meats, which breed melancholy blood, but it is purged with this flux : a third reaſon is, motion cauſes heat, and heat digeſtion, but, ſtrict Jews never move, labour, nor converſe with men, beſides, they are in continual fear leſt we ſhould revenge the death of our Saviour, which breeds a coldneſs in them, and hinders digeſtion, cauſing melancholy blood, which is by this means purged out.

Of the HEART.

Why are the heart and lungs called lively parts of the body ?

From the word *Spiritus*, which ſignifies breath, life or ſoul, and becauſe the vital ſpirits are engendered in the heart. Yet that's no good anſwer, for the liver and brain might be ſo called, becauſe the liver giveth nutriment, and the brain ſenſe and life ; the conſequence is clear, for the vital ſpirits are engendered in the liver, and the ſenſible and animal ſpirits in the brain.

Why are the lungs light, ſpungy and full of holes ?

That the air may the better be received in them for cooling the heart, and expelling humours becauſe the lungs are the fan of the heart ; and as a pair of bellows is raiſed up by taking in the air, and ſhrunk by blowing it out, ſo likewiſe the lungs draw the air to cool the heart and caſt it out, leſt through too much heat of the air drawn in, the heart ſhould be ſuffocated.

Why is the fleſh of the lungs white ?

Becauſe they are in continual motion.

Why have thoſe beaſts lungs that have hearts ?

Becauſe the lungs are no part for themſelves, but for the heart ; and therefore it were ſuperfluous for thoſe creatures to have lungs who have no hearts : but nature is never wanting in things neceſſary, nor abounds in ſuperfluities.

Why do such creatures as have no lungs want a bladder?

Because such drink no water to make their meat digest, but only for the tempering their food, and therefore they want a bladder and urine, as appears in such birds as do not drink at all, viz. the falcon and sparrowhawk.

Why is the heart in the midst of the body?

Because it should impart life to all the parts of the body, and therefore it is compared unto the sun, which is placed in the midst of the planets, to pour light unto them all; therefore the Pythagoreans styling the heavens a great living creature, say, the sun is the heart thereof.

Why only in men is the heart on the left side?

To the end the heat of the heart should mitigate the coldness of the spleen, for the spleen is the seat of melancholy, which is on the left side also.

Why is the heart first engendered, for, according to Aristotle, the heart doth live first and die last?

Because, as Aristotle saith, *de juvent et senect.* the heart is the beginning and the origin of life, and without it no part can live. According to the Philosopher, of the seed retained in the matrix, there is first engendered a little small skin, which compasseth the seed, whereof first the heart is made of the purest blood; then of blood not so pure, the liver; and of thick and cold blood, the marrow and brain.

Why are beasts bold that have little hearts?

Because in a little heart the heat is well united, and vehement, and the blood touching it doth quickly heat it, and is speedily carried into the other parts of the body, which gives courage and boldness.

Why are creatures with a small heart timorous, as the hare?

The heart is dispersed in such, and not able to heat the blood that cometh to it, and so fear is bred.

How comes it that the heart is continually moving?

Because in it there is a certain spirit which is more subtle than air, which, by reason so its thickness and rarefaction, seeks a larger space, filling the hollow room of the heart, whereof the dilating and opening of the heart doth follow: and because the heart is earthly, the thrusting, and ceasing to move, its parts are at rest, tending downwards. Galen gives an experiment of an acorn, which, if put into the fire, the heat dissolves its humidity, therefore it doth occupy a greater place, so that the rind cannot contain it, but puffs up, throws it into the fire; the like of the heart: Therefore note, that the heart of a living creature is triangular in a manner, having its least part towards the left side, and the greatest towards the right, and doth also open and shut in the least part, by which means it is in continual motion: the first motion is by the physicians called *Diastole*, that is extending the heart; the other *Systole*, that is, shutting of the heart; and from these two all the motions of the body proceed, and that of the pulse which physicians feel.

Why are great beasts lean?

The natural heat proceeding from the heart consumes that natural humidity which should be converted into fat.

How comes it that the flesh of the heart is so compact and knit together?

It is because in a thick compacted substance heat is strongly received and united, as appears in other things: And because the heart with

its heat ſhould moderate the coldneſs of the brain, it is made of that hard fleſh which is apt to keep a ſtrong heat.

How comes the heart to be the hotteſt part of all living creatures ?

It is ſo compacted as to receive heat beſt, becauſe it ſhould mitigate the coldneſs of the brain.

Why is the heart the beginning of life ?

Becauſe in it the vital ſpirit is bred, which is the heat of life, and therefore according to the opinion of Auguſtine, the heart hath two recepticles, the right and the left; the right hath more blood than ſpirits, which ſpirits it engendered to give life, and vivify the body.

Why is the heart long and ſharp like a pyramid ?

A round figure hath no angles, therefore the heart is round for fear any poiſon or hurtful matter ſhould be retained in it; and, as Ariſtotle affirms, becauſe that figure is fitteſt for motion.

How comes the blood to be chiefly in the heart ?

The blood is in the heart, as in its proper or efficient place which ſome attribute to the liver, and therefore, the heart doth not receive blood of any other part, but all other parts of it.

How happens it that ſome creatures want a heart ?

Although they have no heart, yet they have ſomewhat which anſwers it, as appears in eels and fiſh which have the back bone inſtead of a heart.

Why doth the heart beat in ſome creatures when the head is cut off, as appears in birds and hens ?

Becauſe the heart is what lives firſt and dies laſt, and therefore beats more than other parts.

Why doth the heat of the heart ſometimes fall of a ſudden, as thoſe who have the falling ſickneſs ?

This proceeds from a defect of the heart itſelf and of certain ſmall skins with which it is covered, which being infected and corrupted, the heart falleth on a ſudden; and ſometimes it happens by reaſon of the parts adjoining, and therefore, when any venomous humour goes out of the ſtomach that hurts the heart and parts adjoining, it cauſes this fainting. The diſpoſition of the heart is known by the pulſe, for, a ſwift beating pulſe ſhews the heat of the heart, and a ſlow beating one denotes coldneſs; therefore, a woman that is in health, has a ſlower and weaker pulſe than a man, as ſhall appear hereafter.

Of the STOMACH.

For what reaſon is the ſtomach large and wide ?

Becauſe in it the food is firſt concocted or digeſted, as it were in a pot, that what is pure may be ſparated from that which is not, and therefore, according to the quantity of the food the ſtomach is enlarged.

Why is the ſtomach round ?

Becauſe, if it had angles and corners, food would remain in it, and breed humours, ſo a man would never want agues: which humours nevertheleſs are evacuated, lifted up, and conſumed, and not hid in any ſuch corners, by reaſon of the roundneſs of the ſtomach.

How comes the ſtomach to be full of ſinews ?

Becauſe the ſinews can be extended and enlarded, and ſo is the ſtomach when it is full, but, when empty, it is drawn together, and therefore nature provides, thoſe ſinews.

How comes the ſtomach to digeſt ?

Becauſe of the heat which is in it, which comes from the liver and

the heart. For we ſee in metals the heat of the fire takes away the ruſt and droſs from iron, the ſilver from tin, and gold from copper: ſo that by digeſtion the pure is ſeparated from the impure.

For what reaſon does the ſtomach join the liver?

Becauſe the liver is very hot, and with its heat helps digeſtion, and provokes an appetite.

Why are we cold commonly after dinner?

Becauſe then the heat goes to the ſtomach to further digeſtion, and ſo other parts become cold.

Why is it hurtful to ſtudy ſoon after dinner?

Becauſe when the heat labours to help the imagination, it ceaſes from digeſting the food; ſo that people ſhould walk ſome time after meals.

How come women with child to have an inordinate deſire of eating coals, aſhes, and ſuch like?

It flows from the humours of the ſtomach; and becauſe women with child have corrupt humours, therefore they deſire the like things.

How cometh the ſtomach ſlowly to digeſt fat meat?

Becauſe it ſwims in the ſtomach. Now, the beſt digeſtion is at the bottom of the ſtomach, where the fat deſcends not: Such as eat fat meat are very ſleepy, by reaſon digeſtion is hindered.

Why is all the body worſe when the ſtomach is uneaſy?

Becauſe the ſtomach is knit with the brain, heart, and liver, which are the principal parts in man; and therefore, when it is not well, the other are evil diſpoſed. Another anſwer is, that if the firſt digeſtion be hindered, the others are alſo hindered; for, in the firſt digeſtion, is the beginning of the infirmity that is in the ſtomach.

Why are young men ſooner hungry than old men?

Young men do digeſt for three cauſes: firſt, growing; then, for the reſtoring of life; and laſtly, for converſation of life, as Hippocrates and Galen do ſay; elſe we anſwer, that young men are hot and dry, and therefore, the heat doth digeſt more, and by conſequence they deſire more.

Why do phyſicians preſcribe that men ſhould eat when they have an appetite?

Becauſe much hunger and emptineſs will fill the ſtomach with naughty rotten humours, which are drawn unto it inſtead of meat; which do eaſily appear, becauſe that if we faſt overnight, we have an appetite to meat, but in the morning none. That is therefore a token that the ſtomach is filled with naughty humours, and eſpecially its mouth which is no true filling, but a deceitful one. And therefore, after we have eaten a little, our ſtomach comes to us again; and then the proverb is, One morſel draweth down another: for the firſt morſel having made clean the mouth of the ſtomach, doth provoke the appetite.

Why do phyſicians preſcribe that we ſhould not eat too much at a time, but by little and little?

Becauſe when the ſtomach is full, the meat doth ſwim in it, which is a dangerous thing. Another reaſon is, that as very green would doth put out the fire, ſo much meat choaks the natural heat, and puts it out; and therefore the beſt phyſic, is, to uſe temperance in eating and drinking.

Why do we deſire change of meats according to the change of times; as in winter, beef, pork, mutton, and in ſummer light meats, as veal, lamb, &c.

Becauſe the complexion of the body is altered, and changes according to the time of the year. Another anſwer is, that this proceed from the quality of the ſeaſon, becauſe the cold winter doth cauſe a better digeſtion, and the ſtomach and the belly is hotter in winter, by reaſon of the compaſſing cold, as Hippocrates and Ariſtotle do teach.

Why ſhould not the meat we eat be as hot as pepper and ginger?

Becauſe hot meat doth burn the blood, and diſpoſe it to a leproſy. So contrariwiſe, meat too cold doth mortify and congeal the blood. And our meat ſhould not be over ſharp, becauſe it procureth old age, and too much ſauce burn the entrails, and procureth often drinking, as raw meat doth; and over ſweet meats do conſtipate and cling the veins together.

Why is it a good cuſtom to eat cheeſe after dinner, and pears after all meat?

Becauſe cheeſe, by reaſon of its earthineſs and thickneſs tendeth down towards the bottom of the ſtomach, and ſo putteth down the meat, and the like of pears. Note, that new cheeſe is better than old, for the old dry ſoft cheeſe is very naughty, and procureth the headach; and ſtopping of the liver; and the older the worſe. Whereupon it is ſaid, that the cheeſe is naught and digeſteth all things but itſelf.

Why are nuts good after fiſh? The verſe is,

After fiſh nuts; after fleſh cheeſe,

Becauſe fiſh is of a hard digeſtion, and doth eaſily putrify and corrupt; and nuts help digeſtion, becauſe they are ſomewhat hot; fiſh is poiſoned ſometimes, and nuts are remedy againſt a poiſon. And note, they ſhould be of a clear ſtony water, and not of a cold ſtanding muddy water, and ſhould be ſo in wine and parſley, and ſo it hurteth leaſt.

Why is it unwholeſome to ſtay long for one diſh after another, and to eat of divers kinds of meat?

Becauſe the firſt begins to digeſt when the laſt is eaten, and ſo the digeſtion is not equally made, and therefore the meat digeſted beginneth to corrupt. But yet this rule is to be noted, touching the order of meat, that if there be any diſhes whereof ſome are light of digeſtion, as chickens, kid, veal, ſoft eggs, and ſuch like, theſe meats ſhould be firſt eaten; but groſs meats, as veniſon, bacon, beef, roaſted pork, hard eggs, and fried eggs, ſhould be eaten laſt. And the reaſon is, becauſe that if they ſhould be firſt ſerved and eaten, and were digeſted, they would hinder the digeſtion of the others; and the light meats not digeſted would be corrupted in the ſtomach, and kept in the ſtomach violently, whereof would follow belching, loathing, headach, bellyach, and great thirſt. And by conſequence, it is very hurtful too at the ſame meal to ſup milk and drink wine, becauſe they diſpoſe a man to leproſy.

Which is beſt for the ſtomach, meat or drink?

Drink is ſooner digeſted than meat, becauſe meat is of greater ſubſtance, and more material than drink, and therefore meat is harder to digeſt.

Why is it good to drink after dinner?

Becauſe the drink ſhould make the meat readier to digeſt. For, if a pot be filled with fiſh or fleſh without liquor, then both the pot and the meat is marred. The ſtomach is like unto a pot which doth boil meat, and therefore phyſicians do counſel to drink at meals.

Why is it good to forbear a late ſupper?

Becauſe there is no moving or ſtirring after ſupper, and ſo the meat is not ſent down to the bottom of the ſtomach, but remaineth undigeſted, and ſo breeds hurt; and therefore a light and ſhort ſupper is beſt.

How comes ſome men to evacuate clear meat?

By reaſon of the weakneſs of nature and expulſion; which diſeaſe is called *Lienteria*. Of the BLOOD.

Why is it neceſſary that every living thing that hath blood, hath alſo a liver?

According to Ariſtotle, becauſe the blood is firſt made in the liver, its ſeat, and is drawn from the ſtomach by certain principal veins, and ſo engendered.

For what reaſon is the blood red?

Firſt, it is like the part in which it was made, *i. e.* the liver, which is red, then it is likewiſe ſweet becauſe it is well digeſted and concocted; but if it have a little earthy matter mixed with it, that makes it ſomewhat ſalt, as appears in Ariſt. *lib. Meteor.*

How comes women's blood to be thicker than mens'?

Their coldneſs thickens, binds, congeals, and joins it together.

How comes the blood in all parts of the body through the liver, and by what means?

Through the principal veins, as the veins of the head, liver, &c. to nouriſh all the body. Of the URINE.

How doth the urine come into the bladder, ſeeing the bladder is ſhut?

Some ſay by ſweating, and it ſeems to be true. Others ſay it comes by a ſmall ſkin in the bladder, which opens and lets in the urine. Urine is a certain and not deceitful meſſenger of the health, or infirmity of man. Hippocrates, ſays, that men make white urine in the morning, and before dinner red, but after dinner pale, and likewiſe after ſupper; for there is diverſe colours.

How doth the leproſy proceed from the liver?

Becauſe it doth greatly engender the brains, and breed the falling ſickneſs and apoplexy.

Why is it hurtful to drink much water?

Becauſe one contrary doth hinder and expel another; for water is very cold, and lying ſo on the ſtomach hinders digeſtion.

Why is it unwholeſome to drink new wine; and why doth it very much hurt the ſtomach?

One reaſon is it cannot be digeſted, therefore it cauſes the belly to ſwell, and in ſome ſort the bloody flux; ſecondly, it hinders making water: but to drink good wine is wholeſome.

Why do phyſicians forbid us to labour preſently after dinner?

For three reaſons: firſt becauſe motion hinders the virtue and power of digeſtion; ſecondly, becauſe ſtirring immediately after dinner cauſes the parts of the body to draw the meat raw to them, which often breeds ſickneſs: and thirdly, becauſe motion makes the food deſcend before it is digeſted: but after ſupper it is good to ſtir, by reaſon we ſoon after go to ſleep, therefore ſhould walk a little, that the food may go to the bottom of the ſtomach.

Why is it good to walk after dinner?

It makes a man well diſpoſed, fortifies and ſtrengthens the natural heat cauſing the ſuperfluity in the ſtomach to deſcend: wherefore Avicen ſays, ſuch as neglect this exerciſe fall into inflammation of the heart.

Why is it wholeſome to vomit as ſome ſay?

Becauſe it purges the ſtomach of all naughty humours, expelling them, which would breed agues if they ſhould remain in it. Avicen ſays, a vomit purges the eyes and head, clearing the brain.

How comes ſleep to ſtrengthen the ſtomach and the digeſtive faculty?

Becauſe in ſleep the heat draws inwards, and helps digeſtion; but when we awake, the heat remains, and is diſperſed through the body.

Of the Gall and Spleen.

How comes living creatures to have a gall?

Becauſe choleric humours are received into it, which, through their acidity, help the guts to expel ſuperfluities, alſo it helps digeſtion.

How comes the jaundice to proceed from the gall?

The humour of the gall is bluiſh and yellow, therefore when its pores are ſtopt, the humours cannot go into the ſack thereof, but is mingled with the blood, wandering throughout all the body, and infecting the ſkin.

Why hath not a horſe, mule, aſs, or cow, a gall?

Though thoſe creatures have no gall in one place, as a purſe or veſſel, yet they have one diſperſed in ſmall veins.

How comes the ſpleen to be black?

It is occaſioned by a terreſtrial and earthy matter of a black colour, as Ariſtotle ſays. Another reaſon is, according to phyſicians, the ſpleen is the receptacle of melancholy, and that is black.

Why is he lean who hath a large ſpleen?

Becauſe the ſpleen draws much water to itſelf, which would turn to fat; therefore contrariwiſe, men that have but a ſmall ſpleen are fat.

How does the ſpleen cauſe men to laugh?

Iſodorus ſays, we laugh with the ſpleen, we are angry with the gall, we are wiſe with the heart, we love with the liver, we feel with the brain, and ſpeak with the lungs, that is, the cauſe of laughing, anger, love, wiſdom, ſpeech, and feeling proceeds from the ſpleen, gall, liver, lungs and brain.

The reaſon is, the ſpleen draws much melancholy to it, being its proper ſeat, which melancholy proceeds from ſadneſs, and is there conſumed, and the cauſe failing, the effect doth ſo likewiſe. And by the ſame reaſon, the gall cauſes anger, for choleric men are often angry, becauſe they have much gall. For the better underſtanding of this, note, that there are four humours in man, viz. blood, cholar, phlegm and melancholy; each has its particular receptacle. Of a hot and dry ſubſtance, cholar is engendered, which goes to the gall; but of a cold and dry humour, melancholy is engendered, and goes to the ſpleen; of a cold and moiſt humour, phlegm is engendered, and goes to the lungs for its reception, not (as phyſicians ſay) to the ſpleen; but the blood, which is the moſt noble humour, is engendered in the liver, which is its proper place.

Of Carnal Copulation.

Why do living creatures uſe carnal copulation?

Becauſe it is moſt natural to beget their like; for, if copulation were not, all procreation had ſunk ere now.

What is this carnal copulation?

It is a mutual action of male and female, with inſtruments ordained for that purpoſe, to propagate their kind; and therefore divines ſay, it is a ſin to uſe that act for any other end.

Why is this action good in thoſe who uſe it lawfully and moderately?

Becauſe, ſay Avicen and Conſt. it eaſes and lightens the body, clears the mind, comforts the head and ſenſes, and expels melancholy. Therefore ſometimes through the omiſſion of this act dimneſs of ſight doth enſue, and giddineſs; beſides the ſeed of a man retained above its due time is converted into ſome infectious humour.

Why is immoderate carnal copulation hurtful?

Becauſe it deſtroys the ſight, dries the body, and impairs the brain; often cauſes fevers, as Avicen and experience ſhew; it ſhortens life too as is evident in the ſparrow, which by reaſon of its often coupling, lives but three years.

Why doth carnal copulation injure melancholy or choleric men, eſpecially thin men?

Becauſe it dries the bones much which are naturally ſo. On the contrary, it is good for the phlegmatic and ſanguine, as Avicen ſays, becauſe they abound with that ſubſtance which by nature is neceſſarily expelled. Though Ariſtotle affirms, that every fat creature has but little ſeed becauſe the ſubſtance turns to fat.

Why do not female brute beaſts covet carnal copulation after they are great with young?

Becauſe then the womb or matrix is ſhut, and deſire doth ceaſe.

Why ſhould not the act be uſed when the body is full?

Becauſe it hinders digeſtion, and is not good for a hungry belly, becauſe it weakens him.

Why is it not good after birth.

Becauſe then the pores are open, and the heat diſperſes through the body, yet after bathing it cools the body very much.

Why is it not proper after vomiting or looſeneſs?

Becauſe it is dangerous to purge twice in one day; but ſo it is in this act the reins are purged, and the guts by the vomit.

Why are wild beaſts furious when they couple, as appears in aſſes which bray; and harts, who are mad almoſt, as Hippocrates ſays?

Their blood is kindled with deſire, and nature alſo labours to expel ſuperfluities in them, which diſpoſe to anger and madneſs; therefore the act done, they are tame and gentle.

Why is there ſuch delight in the act of venery?

Becauſe this act is a baſe and contemptible thing in itſelf, inſomuch that all creatures would naturally abhor it were there no pleaſure in it, and therefore nature readily uſes it, that all kinds of living creatures ſhould be maintained and kept.

Why do ſuch as uſe it often, take leſs delight in it than thoſe who come to it ſeldom?

For three reaſons: firſt, becauſe the paſſages of the ſeed, are over-large and wide, therefore it makes no ſtay there, which would cauſe the delight. Secondly, becauſe that through often evacuation there is little ſeed left, therefore no delight. Thirdly, becauſe ſuch, inſtead of ſeed, caſt out blood undigeſted and raw. or ſome other watery ſubſtance, which is not hot, and therefore affords no delight.

Can this carnal copulation be done by the mouth, ſo that beaſts may conceive thereby, as ſome ſay of pigeons, that by kiſſing they do it, and conceive. Some ſay that it is true in the weaſel or ermine.

According to Ariſtotle it is falſe; for, though pigeons do kiſs by the beak, yet they do not couple this way nor conceive. And, becauſe the weaſel carries his young ones from place to place in his mouth, they are of that opinion: But Ariſtotle ſays, whatever goeth in at the

/th is consumed by digestion, and if the seed should go in at the /uth, then that would be consumed by digestion. The major part is /ain, the conclusion doth hold true.

Of the SEED of MAN or BEASTS.

How or of what cometh the seed of man?

There are divers opinions of philosophers and physicians in this point. Some say it is a superfluous humour of the fourth digestion; others say, that the seed is pure blood flowing from the brain, concocted and whitened in the testicles; and some say, it is the superfluity of the second or third digestion; but Aristotle says, the seed is always the superfluity of the last nutriment, that is of blood dispersed throughout the body, and comes chiefly from the heart, liver, and brain: which is argued, because those parts are greatly weakened by ejecting seed, and therefore it appears that carnal copulation is not good. But some think, when moderately used, it is very wholesome.

Why is a man's seed white, and a woman's red?

'Tis white in man by reason of his great heat and quick digestion, because rarified in the testicles; but a woman's is red, because 'tis the superfluity of the second digestion, which is done in the liver. Or else we may say, it is because the terms corrupt undigested blood, and hath its colour.

Doth the seed of a man come from the parts of the body or from humours?

Some say from the parts of the body, and that a lame man begets a lame child; and if the father hath a scar, the child hath one also, which could not be, if the seed did not fall from the parts of the body. Others say, it comes from the humours, by reason it is made of the last nutriment, and that is no part but a humour. As for lameness or scars, they proceed from imagination of the mother at the time of carnal copulation.

How comes the imagination of the mother to cause her to bring forth a black-moor, as Albertus Magnus reports of a queen who, in the act of carnal copulation, imagined a black being painted, and in her sight?

As it is said, the imagination of a fall, makes a man fall, and the imagination of a leprosy makes a man a leper; so, in this the imagination is above the forming power, and therefore the child born followeth the imagination, and not the power of forming and shaping, because 'tis weakest.

Doth the man's seed enter into the substance of the child?

The seed of both father and mother go into the substance of the child in the womb, as cream goeth to the substance of the cheese: Yet this opinion doth not seem to be of force, therefore, we say, the seed doth not go into the substance of the child; and it is proved thus, because that so the matter and the efficient cause should be all one, which is against the philosopher. The consequence is good, because the seed is the efficient cause of the house, and therefore is not the material cause of the child. This is proved another way; as there is the self same material cause of nourishment and generation; so we have our being and nourishment of the same matter: But the seed cannot be the material cause of nourishment, according to Averrois, therefore not of the being: And as both seeds are shut up in the womb, so that of the man disposeth and prepares the woman's to receive the form, perfection, or soul, which being done, it is converted into a humidity that is breathed out by the pores of the matrix.

How come females to have monthly courſes ?

They are cold in reſpect of men, and as their nouriſhment cannot all be converted into blood, a great part thereof turns to menſes, which are monthly expelled.

For what reaſon do not the courſes come before thirteen ?

Becauſe young women are hot, and digeſt all their nouriſhment, therefore they have not them before that age.

For what reaſon do they leave them at about fifty ?

Some anſwer that old women are barren, and therefore they ceaſe; but a better anſwer is, that then nature is weak in them, and therefore they cannot expel them; there is great ſtore of immundities bred in them, which lies in a lump; this makes them troubled with coughs and other infirmities. Men ſhould refrain their uſe at thoſe times.

Why have not breeding women the menſes ?

Becauſe that then they turn into milk, and into the nouriſhment of the child: for, if a woman with child have them, it is a ſign ſhe will miſcarry.

Why are they termed menſtrua ?

From the word *menſis* a month, becauſe it is a time which meaſures the moon, as ſhe ends her courſe in 29 days and 14 hours. The moon hath dominion over moiſt things, and the menſes are humid, and moiſt things increaſe and decreaſe as the moon does.

Why do they continue longer with ſome than with others, with ſome ſix or ſeven, but commonly with all three days ?

The firſt are colder, therefore they increaſe moſt in them, and conſequently are longer in expelling; other women are more hot, and therefore they have fewer, and are ſoon expelled.

Why are the terms retained before they are run ?

Some ſay in the matrix or womb: but Averrois ſays, the matrix is the place for generation, and that thoſe terms further not generation at all; therefore he aſſerts that there are certain veins about the backbone which retain them: a ſign of which is, thoſe women, at that time, have great pain in their backs.

Are the menſes which are expelled, and thoſe of which the child is engendered, all one ?

No; becauſe the one are unclean, and unfit for that purpoſe, but the other very pure and clean, therefore fitteſt for generation.

Why do thoſe got with child, when they have the terms upon them, bring forth weak and leprous children ?

Becauſe they are venomous; ſo the cauſe appeareth in the effect.

Why have women their terms, ſome at the new moon, ſome at the full, and others at the wain ?

By reaſon of their ſeveral complexions; and though all women in reſpect of men are phlegmatic, yet ſome are more ſanguine than others; ſome more choleric. As months have their quarters, ſo have women their complexions: One of a ſanguine complexion hath her terms in the firſt quarter, a choleric in the ſecond, a melancholic in the third, &c.

Why have the ſanguine theirs in the firſt quarter ?

Becauſe ſaith Galen, every ſuch thing added to ſuch a thing doth make it more ſuch; therefore the firſt quarter of the moon increaſeth blood in a ſanguine complexion, and then ſhe expels it.

How do they come in the end of the month ?

Becauſe moſt women then are phlegmatic, and the laſt quarter is phlegm;

Or elſe it proceeds from defect, and therefore cold works, then do multiply the matter, and ſo multiplied, is then expelled.

How happens the pain and grief at that time?

Becauſe it is like the pain of the ſtranguary in making water drop by drop; for the ſtranguary, by reaſon of the drink undigeſted, offends the ſubtle paſſage of the urine, as happens after bathing; ſo the menſes, undigeſted and of an earthy ſubſtance, hurt the paſſage by which they go.

Why do women eaſily conceive after their menſes.

Becauſe the womb being cleanſed, they are better prepared for conception.

Why do women look pale when they are upon them?

Becauſe then the heat goes from the outward part of the body to the inward, to help nature and expel their terms, which deprivation of heat doth cauſe a paleneſs in the face. Or elſe it is, becauſe that flux is cauſed of raw humours, which, when they run, make the face colourleſs.

Why do they at that time abhor their meat?

Becauſe nature labours more to expel their terms, than to digeſt, and therefore, if they ſhould eat, it would remain raw on their ſtomach.

Why are ſome women barren and cannot conceive?

1. It proceeds ſometimes of the man, who being of a cold nature, his ſeed is unfit for generation: 2. Becauſe it is wateriſh, and ſo doth not ſtay in the womb: 3. The ſeed of both is not proportionate; as if the man be melancholy and the woman ſanguine, or the man choleric and the woman phlegmatic; for it is evident in philoſophy, that the agent and the patient ought to have the ſame proportion, elſe the action is hindered.

Why do fat women ſeldom conceive with child?

Becauſe they have a ſlippery womb, and the ſeed will not ſtay in; or elſe becauſe the mouth of the matrix is very ſtrait, and the ſeed cannot enter in, or if it do, it is ſo very ſlowly, that it grows cold in the mean time, ſo is unfit for generation, and is diſſolved into any fleſhy ſubſtance.

Why do thoſe of very hot conſtitutions ſeldom conceive?

Becauſe the ſeed in them is extinguiſhed or put out as water caſt into fire.

Why are whores never with child?

By reaſon of divers ſeeds, which corrupt and ſpoil the inſtrument of conception, for it makes them ſo ſlippery that they cannot retain the ſeed. Or elſe it is becauſe one man's ſeed deſtroys another, ſo neither is good for generation, Albertus ſays, the beſt thing to help conception is to take the matrix of a hare beat to powder, in drink.

Why have ſome women long and ſlender children, and others thick and ſhort?

Becauſe, as Galen and Averrois ſay, the child is formed according to the dimenſions of the womb: wherefore, becauſe ſome women have a long and narrow womb: their children are long and ſlender, others, on the contrary, ſhort and large, therefore their children be ſhort and thick.

Why doth a woman conceive twins?

According to Galen, becauſe there are ſeveral cells or receptacles in the womb, wherefore they may naturally have ſo many children at once, as there falls ſeed in thoſe cells: There are three in the right ſide and three in the left: in the right ſide boys are engendered, in the left girls; and in the midſt of theſe cells or chambers there is another, where the ancients aſſert hermaphrodites to be engendered. If a woman ſhould have more than ſeven children at once, it would rather be miraculous than natural.

Why are twins not ſo ſtrong as other men?

By reaſon the ſeed which ſhould have been for one is divided into two, and therefore they are weakly, and in truth do not often live long.

Of Hermaphrodites.

How are Hermaphrodites begotten ?

There are ſeven cells in the womb, three on the right ſide, and three on the left, and a ſeventh in the centre, into which the ſeed falls, an hermaphrodite is ſaid to begotten in this manner: Nature tends always to that which is beſt, therefore ſhe doth always intend to beget a male; which male is ſometimes begotten in all its principal parts, and yet, through the evil diſpoſition of the womb and object, and inequality of the ſeeds, when nature cannot perfect the male, ſhe brings forth the female too: and therefore an hermaphrodite is impotent in the privy parts of man, as appears by experience.

Why doth not nature diſpoſe in him two ſecret parts of a man, or two of a woman ? but one of a man and one of a woman ?

Becauſe nature would make one in vain; but philoſophers ſay that God made nothing in vain.

Is an hermaphrodite accounted a man or a woman ?

Is to be conſidered in which member he is fitteſt for the act of copulation: If fitteſt in the woman's then it is a woman; if in the man's he is a man.

Should he be baptized in the name of a man or a woman ?

In the name of a man, becauſe names are given *ad placitum*, and therefore he ſhould be baptized according to the worthieſt name.

Should be ſtand in judgment in the name of a man or woman ?

According to the law, he ſhould firſt ſwear before he be admitted to judgment, which ſecret part he can uſe, and ſo is to be admitted according to the uſe and power of that part.

Of Monsters.

Doth nature make any monſters ?

She doth; for if ſhe did not, we would ſoon be deprived of her end. For of things poſſible ſhe doth always propoſe to bring forth that which is moſt perfect; but in the end, through the evil diſpoſition of the matter, and influence of ſome eſpecial conſtellation, not being able to bring forth that which ſhe intended, ſhe brings forth that which ſhe can. In Albertus' time, a cow brought forth a calf half a man, the countrymen ſuſpecting a ſhepherd, would have burnt him with the cow, but Albertus being ſkillful in aſtronomy, ſaid that this did proceed from a ſpecial conſtellation, and delivered the ſhepherd from their hands.

Be they one or two ?

Ariſtotle ſaith you muſt look into the heart, and if there be two hearts, there be two men.

Why is a man born ſometimes with a great head, and ſix fingers on one hand, or with four ?

Ariſtotle ſaith, it proceeds of ſuperfluity and abundance of matter; when there is too much matter, then he is born with a great head, or ſix fingers; but if there be want of matter, then there is ſome part wanting, or leſs than it ought to be.

Of Infants.

Why are ſome children altogether like the father, ſome like the mother, ſome like both, and ſome to neither ?

If the ſeed of the father do wholly overcome that of the mother, the child doth wholly reſemble the father; but if the mother's predominate, then it is like the mother; but if he be not like either, that doth happen

for many cauſes; ſometimes through the four qualities, ſometimes thro' the influence of ſome heavenly conſtellation. Albertus ſaith, that there was on a time a good conſtellation for begetting of hogs, and a child was then begotten and brought forth, which had a face like a hog: According to this, divers ſorts of monſters are brought forth.

Why are children oftener like the father than the mother?

That proceeds of imagination of the mother and the act of cōpulation, and therefore the children get the diſpoſition of the father. This appears from an Ethiopian queen, who brought forth a white child, becauſe her imagination was upon a white colour: and is ſeen in Jacob's ſkill in caſting rods of divers colours into the water when his ſheep went to ram.

Why do children ſometimes more reſemble their grandfathers and great grandfathers, than their parents?

The virtue and force of the grandfather is grafted in the heart of the begetter, and it may be ſaid that ſometimes it doth proceed of the ſimilitude of the nutriment, and then the child is formed by the ſimilitude of the grandfather.

Why do children, according to the courſe of nature, come out of the mother's womb in the ninth month?

Becauſe the child is then fully perfect, or elſe becauſe ſome benign planet doth reign, as Jupiter, who is a friend of nature; for, according to the aſtronomers, he is hot and moiſt, and therefore doth temper the malice and naughtineſs of Saturn, who is cold and dry; therefore for the moſt part, children born in the ninth month, are healthful.

Why do children born in the eighth month, for the moſt part, die quickly; and why are they called the children of the moon?

Becauſe the moon is a cold planet, which has dominion over the child, and therefore doth bind it with its coldneſs which is the cauſe of its death.

Why doth a child cry as it is born?

1ſt, becauſe of the ſudden change from heat to cold, which cold doth hurt its tenderneſs. 2dly, Becauſe the child's ſoft and tender body is wringled and put together, coming out of the narrow and ſtraight paſſage of the matrix; and eſpecially the brain being moiſt, and the head preſſed and wringled together, is the cauſe that ſome humours do diſtil by the eyes, which are the cauſe of tears and weeping. 3dly, Divines ſay, it is for the tranſgreſſion of our firſt father, and original ſin.

Why doth a child put his finger into his mouth when he cometh firſt into the world?

Becauſe that coming out of the womb, he cometh out of a hot bath, and entering into the cold, he puts his fingers into his mouth for want of heat.

How doth a child come into the world out of the womb?

He cometh forth with the head forward; for, if he ſhould come with the thighs or arms, he would kill himſelf and the mother.

Of the YOUNG ONE in the womb.

How is the young one engendered in the womb?

The firſt ſix days the ſeed hath the colour of milk, but in the ſix days following a red colour, which is near unto the diſpoſition of fleſh, and then is changed into a thick ſubſtance of blood, but in twelve days following, this ſubſtance is made ſo thick and ſound, that it is able to receive ſhape and form, becauſe a fluid or running ſubſtance ſteepeth on till its birth; and it is governed every month by the planets.

Doth the child in the womb void excrements or make water?

No: and the reaſon is, becauſe he hath the firſt digeſtion which is in the

ſtomach; he receives no food by the mouth, but it comes to him at the navel, he therefore makes no urine, but ſweats, which at beſt is but little, and is received in a ſkin in the matrix, and at his birth is caſt out.

Why doth the child come eaſily out of the matrix, after ſeven, eight, or nine months?

Becauſe, ſaith Galen, when the fruit is ripe, then the ligaments are broken, and ſo it fails out.

Of ABORTION and untimely BIRTH.

Why do women that eat unwholeſome meats eaſily miſcarry?

Becauſe it breeds putrefied ſeed in them, which the mind abhorring doth caſt out of the womb, as unfit for the moſt noble ſhape which is adapted to receive the foul.

Why doth wreſtling or leaping cauſe the caſting of the child as ſome ſubtile women uſed to do on purpoſe?

Becauſe it looſes the ligaments which ſhould hold the child.

Why doth thunder cauſe miſcarriage?

The vapour is burning, and doth eaſily hurt the tender ſubſtance of the child, entering in at the pores of the matrix. Albertus ſays, if the child be near delivery, lightning and thunder will kill it.

Why doth thunder and lightning rather cauſe young women than old to miſcarry?

Becauſe the bodies of young women are fuller of pores, and more ſlender, and therefore the lightning ſooner enters into their body; but old ones have a thick ſkin, well compacted, therefore the vapours cannot enter.

Why doth much joy cauſe a woman to miſcarry?

Becauſe in the time of joy a woman is deſtitute of heat, and ſo the miſcarriage doth follow.

Why do women eaſily miſcarry when they are firſt with child, viz. the firſt, ſecond, or third month?

Apples and pears eaſily fall at firſt, becauſe the knots and ligaments are weak, ſo it is of a child in the womb.

Why is it more hard to miſcarry in the fourth, fifth, or ſixth month?

Becauſe then the ligaments are ſtronger and well fortified.

Of divers MATTERS.

Why have ſome women greater grief than others in child birth?

For three reaſons, 1ſt, For the largeneſs of the child. 2dly, The midwife being unſkilful, And thirdly, becauſe the child is dead. For the contrary cauſes, ſome have leſs pain.

Why hath not a man a tail like a beaſt?

Becauſe a man is a noble creature, whoſe property is to ſit: ſo a beaſt cannot, that hath a tail.

Do thoſe who keep hot houſes expel the heat of the furnace better with cold water than hot?

Yes: becauſe they are of contrary qualities, which work ſtrongly one againſt the other, and therefore, the heat is eaſily expelled from the ſtone.

Why does hot water freeze ſooner than cold?

Becauſe hot water is thinner, and gives better entrance to the froſt.

For what reaſon is every living thing dull after copulation?

Becauſe the act is filthy and unclean, and ſo every living creature abhors it: When men do think upon it they are aſhamed and ſad.

Cannot drunken men judge of taſtes as well as ſober men?

No: becauſe the tongue being full of pores and ſpungy, it receives great

moiſture in it, and more in drunken men than in ſober; therefore the tongue, by often drinking, is full of bad humours and ſo the faculty of the taſte is out of order; therefore through the thickening of the mean, *i. e.* taſte, drink taken of drunkards is not preſently felt, for, to due feeling there is requiſite to have a due proportion of the mean. And by this is alſo underſtood why drunk perſons have not a perfect ſpeech.

Why have melancholy beaſts long ears; and why are not thoſe men wiſe for the moſt part that have long ears, but thoſe otherwiſe that have ſhort ones?

The ears proceed from a cold and dry ſubſtance called a griſtle, which is apt to become a bone; and becauſe melancholy beaſts do abound with this kind of ſubſtance, they have long ears.

How comes the other to be half witted?

Becauſe the minds and ſouls follow the bodies, for, if the ſenſes of the body be ſubtle, the ſoul exerciſes ſubtle operation, as well active as ſpeculative; and the contrary is in a groſs body.

How is the intellectual ſoul joined to a child in the womb of the mother; and how does the man who begets it, make the matter apt and fit to receive the ſoul?

Divines ſay, that into a ſubſtance ſufficiently diſpoſed and made fit, God doth infuſe the intellectual ſoul; and St. Auguſtine ſays the like: the ſoul in creating is infuſed, and in infuſing is created.

Why do hares ſleep with their eyes open?

Their eyes ſtand out, and their eyelids are ſhort, therefore never quite ſhut. Beſides, they are timorous; and, as a ſafeguard to themſelves, ſleep with their eyes open.

Why do not crows feed their young till they be nine days old?

Becauſe ſeeing them of another colour, they think they are of another kind; meanwhile God feeds them with heavenly dew, as the Pſalmiſt ſaith, "He giveth beaſts their food, and young crows will call upon him."

Why are ſheep and pigeons mild creatures?

Becauſe they want galls, which ſtir anger.

Why have birds their ſtones inward?

Becauſe if they were outward, they would hinder their flying and lightneſs.

How comes it that birds do not piſs?

Becauſe that ſuperfluity which would be converted into urine is turned into feathers, for their is much moiſture in the feathers. Another reaſon is, they are in continual motion, therefore moiſture in them is dried up by air or wind.

How come long eggs to be a ſign and cauſe of the male, and flat ſhort eggs of the female?

Hippocrates ſays, it is the property of heat to aſcend from the centre to the circumference of cold; therefore long eggs have great heat and therefore paſs into the ſubſtance of the male, for, in every kind the male is hotter than the female, as philoſophers ſay. If the eggs be ſhort and flat, it is a ſign the heat is ſmall and undiſperſed, and goeth into the ſubſtance of the female.

Why do we hear better by night than by day?

Becauſe their is a greater quietneſs in the night than in the day, for the ſun doth not exhale the vapours by night, as it doth in the day, therefore, the mean is more fit than ready, and the mean being fit, the motion is better done by it, which, is ſaid to be done by a ſound. Another reaſon is, there are more motions and ſounds in the air, in the day, than in the night, which hinders one another: In the night

there is silence, which is opposite to sound, and opposites put one against the other shew better.

For what reason doth a man laugh sooner when touched in the armpits than in other parts of the body?

Because there is in that place a meeting of many sinews and the mean we touch (which is the flesh) is more subtle, than in other parts, and therefore a better feeling. When a man is moderately and gently touched there, the spirits there dispersed run into the face, and thence causes laughter; but if touched too roughly, then there is not that delight.

How comes burnt wood to be black, and a bone burnt to be of a white substance?

Because the wood, before it was burnt, was moist and the heat is not able to consume all the moisture of the wood, and therefore there remaineth some after the burning, which is converted into black substance, because the humidity of the wood was slimy, and could not altogether be consumed by the fire. But a bone is cold and dry of its own nature, having but small moisture in it, which the burning doth wholly consome, and so the moisture being consumed, the body waxeth white.

Why do some women love white men, and some black?

There are two answers. Some women have a weak sight, and such delight in black, because white doth hurt the sight more than black. The second reason is, because like delights in like; some women are of a hot nature, and such are delighted with black, because blackness doth follow heat, and others are of a cold nature, and these are delighted with white, because cold is the mother of whiteness.

Why do men willingly sleep after labour?

Because that through continually moving the heat is dispersed to the external parts of the body, which after labour, is gathered together to the internal parts, to help the digestion: and thence vapours do rise from the heart to the brain, which stop the passages by which the natural heat should be dispersed to the external parts; and then the external parts being cold and thick, by reason of the coldness of the brain, sleep is procured. And by this it appeareth, that such as eat and drink much do sleep much and long, because great store of humours and vapours are bred in such, which cannot be digested by the natural heat.

Why are such as sleep much evil disposed and ill coloured?

Because that in sleeping much moisture is gathered together, which cannot be consumed, and is expelled in waking, and so it doth covet to go out through the superficial part of the body, and especially it resorts to the face, and is the cause of a bad colour, as appeareth in such as be phlegmatic, who desire more sleep than others.

Why doth it appear unto some in their sleep that they eat and drink sweet things?

Because the phlegm drawn up by the jaws doth distil and drop to the throat, and this phlegm is after a sort sweet, and therefore that seemeth so to them.

Why do some dream in their sleep that they are in the water and drowned, and some that they are in the water and not drowned?

The reason is because the phlegmatic substance doth run to the high parts of the body, and then they think they are in the water and drowned; and when that substance draweth into the internal parts, then they think they escape. Another reason may be, overcome re-

pletion and drunkenneſs: and therefore when a man is overcome, filled with meat, the fumes and vapours aſcend and gather together, and therefore they think that they are drowned and ſtrangled: but if they cannot aſcend ſo high, then they ſeem to eſcape.

May a man procure a dream by an external cauſe?

Ariſtotle holdeth that it may be done, if a man do ſpeak ſoftly at a man's ear, and awake him, then of this ſtirring of the ſpirits there are thunderings and buzzings in the head, and ſo they dream of that. And ſo ſome men have dreams by divine revelation, when it pleaſed God to ſend any.

How many humours are there in a man's body?

Four: whereof every one hath its proper place in man's body. The firſt is choler, which phyſicians call *flava bilis* and is placed in the liver. The ſecond is melancholy, called *atra bilis*, whoſe ſeat is in the ſpleen. The third is phlegm, whoſe place is in the head. The fourth is blood, whoſe place is in the heart.

What condition and quality hath a man of a ſanguine complexion?

He is fair and beautiful: he hath his hair for the moſt part ſmooth; he is bold, he retaineth that which he hath conceived; he is ſhamefaced, given to muſick, a lover of ſciences, liberal, courteous, and deſires no revenge.

What properties do follow a phlegmatic complexion?

They are dull of wit, their hair never curles, they are ſeldom very thirſty, they are much given to ſleep, they dream of things belonging to the water, they are fearful, covetous, given to heap up riches, are weak in the act of venery.

What properties do follow the choleric man?

He is furious and angry, quarrelſome, given to war, pale coloured and unquiet; drinks much, ſleeps little, and deſires much the company of women.

What properties do follow the melancholy man?

He is unquiet, brown in complexion, his veins hidden, he eateth little, and digeſteth leſs; when he dreameth, it is of dark confuſed things; he is ſad, fearful, exceeding covetous and incontinent, unleſs he bridle his affection.

What dreams do follow theſe complexions?

Pleaſant merry dreams do follow the ſanguine complexion: fearful dreams the melancholy; the choleric dream of children, fighting, and fire; and the phlegmatic dream of water. And this is the reaſon why a man's complexion is ſaid to be known by his dreams.

What is the reaſon that if you cover an egg over with ſalt, and let it lie in it a few days, all the meat within is conſumed?

The great dryneſs of the ſalt doth conſume the ſubſtance of the egg; but in ſand ſome ſay they may be kept as long as you pleaſe, as the mariners practice.

Why is the melancholy complexion the worſt of all?

Becauſe it is the dregs of the blood, which is an enemy to mirth, and fartheſt from the beginning of a man's life, and bringing old age and death, becauſe it is cold and dry.

Why is the phlegmatic for the moſt part dull of wit?

Becauſe the vivacity of wit proceedeth of heat, ſo of cold, the contrary, which they are ſubject unto.

Wherefore doth it proceed that some men die with extreme joy, and some with extreme grief?

Over great joy doth overmuch heat the internal parts of the body, and overmuch heat doth drown and suffocate the body, in which failing a man dieth.

Why hath a man so much hair on his head?

The hair of the head proceedeth of the vapours which ariseth from the stomach, and ascend to the head, and also of the superfluities which are in the brain; and those two passing through the pores of the head, are converted into hair, by reason of the heat and dryness of the head. And because man's body is full of humours, and hath more brains than other creatures, and also more superfluities in the brains, which the brain expelleth, it followeth that he hath more hair than other living creatures.

How many ways is the brain purged, and other hidden places of the body?

Four: the watery and gross humours are purged by the eyes, melancholy by the ears, choler by the nose, and phlegm by the hair.

What is the reason that such as are very fat in their youth, are in danger to die on a sudden?

Such have very small and close veins, by reason of their fatness, so that the air and the breath can hardly have free course in them; and thereupon the natural heat wanting some refreshment of the air, is put out, and as it were quenched.

Why do garlick and onions grow after they are gathered?

They grow in the great humidity which is in them.

Why do men feel cold sooner than women?

Because that men being more hot than women, have their pores more open, and therefore the cold doth sooner enter in them than women.

Why are not old men so much subject to the plague, as young men and children?

They are cold, and therefore the pores are shut up, and not so open as in youth; and therefore the infecting air doth not penetrate so soon as when they are open, as in youth, by reason of heat.

Why do we cast water in a man's face when he swooneth?

Because that through the coldness of water, the heat may run to the heart, and so give strength.

Why are those waters best and most delicate which run towards the sun rising.

Because they are soonest striken with the sun beams, and made pure and subtle, because the sun hath them long under him, and by that means takes off the coldness and gross vapours which they gather from the ground they run through.

Why have some women such weak and small voices?

Because their instruments and organs of speaking, by reason they are cold, are small and narrow; and therefore receiving but little air, causeth the voice to be small and effeminate.

Whereof doth it proceed that want of sleep doth weaken the brain, and the body?

Much watching doth engender choler, which being hot, doth dry up and lessen the humours which conserve the brain, head and other parts of the body.

Whereof doth it proceed that vinegar doth staunch blood?

It proceedeth of its cold virtue, for all cold naturally is binding, and vinegar being cold hath the like property.

Why is the sea water salter in summer than in winter?

It proceedeth from the heat of the sun, seeing by experience that a salt thing being heated becometh more salt.

Why do men live longer in hot regions than cold?

Because they may be more dry, and by that means the natural heat is better conserved in them than in cold countries, because the cold doth extinguish the heat.

Why is well-water seldom or never good?

All water which standeth still in the spring, and is never heated by the sun beams is very heavy, and hath much earthly matter in it; and therefore, wanting the heat of the sun, is naught.

Why do we sleep better and more at ease on the right side than on the left?

Because, when we lie on the left, the lungs do lie upon and cover the heart, which is on that side under the pap. Now the heart, the fountain of life, being thus occupied and hindered with the lungs, cannot exercise its own proper operation, as being overmuch heated with the lungs lying on it, and therefore wanting the refreshment of the air, which the lungs do give it, like the blowing a pair of bellows, is choaked and suffocated; but by lying on the right side these inconveniences are avoided.

Whereof doth proceed that the holding of the breath doth cause yexing to cease?

Because the holding the breath doth heat the internal parts of the body. And this heat chaseth away the yex, being nothing else but a cold air within the body.

What is the reason that old men sneeze with difficulty?

Because that through their coldness their arteries are very narrow and close, and therefore the heat is not of force to expel the cold: for, I think sneezing is like the combat in the air made by thunder, which is caused by heat and cold.

Why doth a drunken man think that all things about him do turn round?

Because the spirits which serve the sight are mingled with vapours, fumes, and wine; and then the overmuch heat causeth the eye to be in a continual moving; and the eye being round, causeth all things about it to seem to go round.

Wherefore doth it proceed, that bread which is made with salt is lighter than that which is made without it, considering salt very heavy of itself?

Although bread is heavy of itself, yet the salt dries it, and makes it light by reason of the heat which it hath, which heat doth dry, and the more heat there is in it the better the bread is, the lighter and more wholesome for the body.

Why is not new bread good for the stomach?

Because it is full of moistness, and thick, and hot vapours, which do corrupt the blood, and hot bread is blacker than cold, because heat is the mother of blackness, and because the vapours are not gone out of it.

Why does lettice make a man sleep?

Because they engender gross vapours.

Why do the dregs of wine and oil go to the bottom, and those of honey swim a top?

Because the dregs of wine and oil are earthy and not purged before, and therefore being of the nature of earth do go to the bottom; but honey is a liquor, which cometh from the stomach and belly of the bee, and

is there in some sort purified and made subtle; and by that means, that which remains is light and hot, and therefore goes upwards.

Why do cats and wolves' eyes shine at night and not in day?

The eyes of these beasts are by nature more christaline than the eyes of other beasts, and therefore do shine as they do: but the brightness of the sun do hinder them to be seen in the day time.

What is the reason that some men when they see others dance, do the like with their hands and feet, or by some other gesture of the body?

The answer is because the sight having carried and represented unto the mind that action, and judging the same to be pleasant and delightful, and therefore (desiring it) the imagination draweth the likeness of in conceit, and stirs up the body by the gestures.

Why doth much sleep cause some to grow fat and some lean?

Those who are of ill complexion, when they sleep, do consume and digest the superfluities of that they have eaten, and therefore become fat. But such as are of good complexion when they sleep are much more cold, and so digest less.

How and for what cause do we suffer hunger better than thirst?

When the stomach hath nothing to consume, it consumeth the phlegm and humours which it findeth more ready and most at at hand: and therefore we suffer hunger better than thirst, because the heat hath nothing to refresh it withal.

Why doth the hair fall after a great sickness?

Where the sickness is long, as in agues, the humours of the head are dried up through overmuch heat, and therefore wanting nourishment they fall.

Why do the hair of the eyebrows grow long in old men?

Because that through their age the bones of the eyelids are thin, by reason of the want of heat, and therefore the hair doth grow there, by reason of the rheums of the eyes. The like doth happen in such as imagine much, because that with their heat they draw up many humours to the fore part of the head, where the imagination is placed.

Whereof proceedeth gaping?

Of gross vapours which occupy the vital spirits of the head, and the senses are cold, making them ready to sleep.

Why do some flowers open with the sun rising, and some with the sun setting?

Cold doth shut and close as hath been said, but the heat of the sun doth open and enlarge: some do compare the sun to the soul of the body; for, as the soul giveth life, and when it departeth, death followeth; so the sun doth give life, and vivifies all things; the cold bringeth death, withering and decaying of all things.

Why doth grief cause men to grow old and grey?

Age is nothing else but a dryness, and want of humours in the body; grief then causeth alteration, and alteration heat, and heat dryness; age followeth immediately, and greyness.

Why are gelded beasts wicker than such as are not gelded?

Because they have lesser heat and by that means lesser force and strength.

M. ANTON. ZIMARAS SANCTIPERTIAS's PROBLEMS.

Why it is esteemed in the judgment of the most wise the hardest thing to know a man's self?

It is because nothing can be known; its form and perfection cannot be found; to know the form and perfection of a man's self, as it cometh unto the philosopher, is a matter hard enough, and a man, by the

authority of Plato, either is nothing, or if he be any thing, he is nothing but his soul. Or, is it because it cannot be done by a reflected action, and to reflect and look unto himself as a token that he is separated by the flesh; for he who would know himself should be drawn from sensible affections; and how hard this, no man is ignorant of? Or, is it because a man liveth by understanding? But the understanding, a man cannot conceive of himself, but after the understanding of senses, which is very hard.

Why was Socratees esteemed the wisest of all Greece, by Apollo, seeing that, by the opinion of Aristotle, he was conversant and busied only about morality, and nothing about nature?

Whether it is because it is more expedient for the commodity and use of men to live well and contemplate; or because it seemeth to Plato that he was usually professed of him every where, I know one thing, that I know nothing.

Why do men especially strive and contend in things of wit?

It is because they think that other things which are called goods, are the power of another, as the gifts of the body are nature's and external, and worldly goods are subject unto the rule of fortune; whereof it cometh to pass, that every man can easily suffer himself to be overcome in such things, as things not happening through his fault or occasion, but they think wit to be in their own power. Or, it is because they think that the goods of the mind do excell all other goods, and therefore do think it a thing most natural to contend for that which is most excellent. Or, it is because it is a common disease of all men, as it seemeth unto a certain wise man, that every man doth think himself more learned than he is, and therefore doth desire to perform that which he believeth, without study and labour.

Why do men say that philosophy is naked?

It is because truth is naked, and that there needs no colour of words when we handle a matter of truth; for, it belongeth to sophiers to dispute of terms when the sincere truth is sought. Or, it is because they do not play the philosopher well, who seek philosophy for gain and ambition and not for herself. Or, it is because he should be void from all worldly affections, who desireth to endear himself in the study of philosophy; for Aristotle doth say, the soul is made wise by rest and quietness. And it were easy for philosophers to become rich, if they would, as it appeareth by the example of Thales.

Why do men desire to be had in memory after their death, and therefore some make pyramids, statutes, images, and divers other tokens and monuments which they build and leave behind them?

It is because all things as seems unto Aristotle, do desire to participate of some perpetuity and divine being, as much as they can; and therefore, if they cannot remain in nature and being yet they endeavour at least to continue in the opinion and conceit of men. Or else custom hath brought it in so, to stir up such as comes after, to the end, they should not degenerate from their parents.

What is the cause why mens' desire grow without measure about fortune's goods?

It is because natural desires, as Seneca saith, have an end, and such desires as proceed of false opinion have no where to end.

Why do poets always assign and appoint some wise men to be familiar with princes: as, Homer doth Nestor with Agamemnon; Euripidies, Tiresius with Creon; Hesiodus, Prometheus, with Jupiter; and Maro, Achates and Æneas?

It is becauſe that, by the law of nature, as Plato doth ſay, wiſdom and power do direct our actions to one end, and to effect the ſame thing, love it and ſeek it.

Why doth Homer when he makes mention of Ambaſſadors, talk always of the ambaſſy of a commander in bare words.

It is becauſe it is the duty of ambaſſadors to declare the bare will of the commander, and put his ſentence in execution; and therefore, it is certain, he ſhould add nothing; or elſe, it is becauſe the commandment of him who doth rule, that is, of a wiſe man, is put into good order, and is preſumed to be moſt perfect. And therefore there ſhould be nothing changed; but his decrees and conſtitutions are to be judged abſolute and perfect.

Why does Ariſtotle uſe exceeding brevity in moſt hard matters?

Whether becauſe it is the cuſtom of wiſe men to load their words with ſentences, or elſe to the end that he would be obſcure, to fear and keep off rude wits from reading of his works, as it ſeemeth in the expoſitors: or, whether it is becauſe that in a hard matter, and in a matter of truth, many words are ſuſpected, becauſe that truth doth conſiſt in few words; or it is becauſe it ſeemeth to wiſe men, in many words there is error often committed.

Why do famous men, in any ſcience, when they do err in any matters, err more dangerouſly than thoſe who are leſs famous?

It is becauſe that ſuch, truſting to the heat of their own wit, are drawn far from their own ſenſes, and therefore, muſt needs be deceived. Avicen may ſerve for a proof of this, who, for all his fame in philoſophy, ſaid, that a man might naturally be brought forth of the earth. And, that great famous Averrois, was thought that a maid might conceive a child in a bath without the knowledge of a man.

Out of ARISTOTLE.

Why is a man, being endued with reaſon, the moſt unjuſt of all living creatures?

It is becauſe men only are deſirous of honor, ſo it comes to paſs that every one covets to ſeem good and yet naturally ſhuns labour, though he attains no virtue by it; or elſe, it is becauſe the nature of a ſophiſter is rather to ſeem, than be and not ſeem; but very few do attain to true virtue.

Why do ſome in their youth beget girls, and in their middle age, and when old beget boys?

It is becauſe the ſeed waxeth cold in ſuch as uſe carnal copulation too often, and therefore in their middle age, when they grow tired, their ſeed is hotter, and ſo produceth males.

Why have children or boys pleaſure in the act of venery, ſeeing they do not caſt forth ſeed?

It is, as the philoſopher ſaith, becauſe there are certain ticklings in the letting out the ſpirit or breath, as it is in ſuch as are of age by caſting forth ſeed.

Why have thoſe the leaſt pleaſure who uſe the act of copulation often?

By often uſing carnal copulation the ſpirit and ſeed doth increaſe and wax cold, therefore not ſo itching or tickling, which is of delight.

Why doth immoderate copulation do more hurt than immoderate letting of blood?

It is becauſe the ſeed is fuller of ſpirit and nutriment, better diſpoſed and prepared for the nurture of the body than the blood; for, ſays Galen the ſeed is the cauſe of the ſubſtantial parts of the body, and of it the body grows and is nouriſhed. And he who is hungry is hurt

more by taking away bread than flour, so the body is more weakened by taking away seed than by evacuating blood.

What is the reason that those who have a very long yard cannot get children?

Because the seed in going a long distance the spirit doth breathe out, and therefore is cold and unfit for generation.

Why do such as are corpulent cast forth little seed in the act of copulation, and are often barren?

It is because the seed of such goes to nourishing the body; for the same reason corpulent women have but few menses.

How come women to be prone to venery in the summer, and men in winter?

It is because at that time his testicles hang down and are feebler than in winter: or else, because hot natures become lively; for a man is hot and dry, women cold and moist, and therefore in summer the strength of men decays, and that of women increases, and she grows livelier by the benefit of the contrary quality. And for the same reason some beasts of a cold nature lie in dens and holes, and, thro' the frigidity of the air, receive little or no nourishment, but revive again when heat comes.

How comes a man to be the proudest of all living creatures?

Whether it is by reason of his great knowledge, or that (as the philosophers say) all intelligent beings having understanding, nothing remains that escapes man's knowledge in particular; or, it is because he hath rule over all earthly creatures, and all things seem to be brought to his arbitrament: Or, I shall answer, that the pride of man proceeds from his not knowing himself; for truly would remember that he is but dust and ashes, came naked into the world, was born to eat his bread by the sweat of his brow, and after born to die, he would abhor pride.

How comes a man to understand one thing and do another?

It is because there is in the same science contrary things; or because the office of the mind is to reach at many things, and the appetite tends to one only; and so a man chiefly lives by understanding and reason, but beasts are governed by appetite, anger, and pleasure.

How comes most women's wits unapt in good things, and prompt in naughty?

Because of a privation which seems to be coupled and joined to her nature; for as a woman is a man's hurt, so the faculty of a privation is always to do mischief.

Why do men say, A woman's first counsel should be chosen?

Because (as we see in things that want reason) their actions and motions are guided to their proper ends by a superior power; for I think that is very true which is said, That their is a Providence which puts into a dishoneſt heart the desire of honesty, and in a poor man the desire of wealth, as far as sufficient. So a woman's understanding, tho' she knows not the reason of good and evil, is sometimes directed by an infallible truth to take some things in hand; but some things they undertake of themselves are to be let alone, as weak and subject to many errors.

How comes it that women desire to go fine, and deck themselves, rather than men?

It is because by nature they are imperfect, so they endeavour to supply their imperfections by art: or else it is because they want the beauty of the mind, so study to adorn their bodies.

How comes it that a tall man is seldom wise?

By reason the largeness of his body proceeds from excess of heat,

and abundance of humidity. Some wise men think the perfection, accomplishment, and goodness of the operation is perfected by dryness, which does always go and increase till it brings us to our end; for the constitution of the body originally sprung from the last humidity, but the vehemence and excess of heat overflows the judgment, and hinders quietude.

Why is a number of princes and rulers naughty?

It is because if the government should dwindle into tyrany, it is better to be under the yoke of one than many; or, because a multitude of rulers seldom regard the good of the public. Hence it proceeds, that if once they disagree, great evil is like to befall the commonality; it is easier for one man to be well disposed than many; in the government of many, there want not strife, debate and envy, for which reason let there be but one prince at a time.

Why have beasts their hearts in the middle of their breast, and man inclining towards the left?

It is because it should moderate the cold on that side; for Aristotle says, man hath only the left side cold. Or, it is as physicians say, because it should give place to the liver, which is on the right side,

Why doth a woman love that man best who had her maiden-head?

It is because that as matter doth covet a form of perfection, so doth a woman the male: Or, it is by reason of shamefacedness, for, as Plato saith, shamefacedness doth follow love. Or, because the beginning of great pleasure doth bring a great alteration in the whole, whereby the powers of the mind are much delighted, and stick and rest immoveable in the same. Hesiod advises to marry a maid.

How comes the night in full of the moon to be somewhat warm, since the moon is cold by night?

Whether it is because the opinion of the peripateticks ought to be preferred, which says, every light heats in that respect it is reflected.

How is the night colder in autumn than in the spring?

Because the air is very thin, and bodies that are rarified are very apt to receive heat, or cold, as is seen in water; for water heated doth sooner freeze than cold.

How are the bodies sooner hurt with cold in autumn than in spring?

Because the bodies which are accustomed to cold, do in spring receive heat, and therefore the moving or mutation is natural, and not surprizing. But in autumn they hasten from heat to cold, not being accustomed. Galen says, Nature doth not indure sudden things.

Why are hairy people more lustful than others?

Because in them is supposed great store of excrements and feed, as philosophers assert.

How comes it that men who have small heads are naturally angry and testy?

Because when the head is little, the brain is so of course, the heat of the heart cannot be moderated with the heat of the brain, as it ought to be, and anger proceeds of the boiling of the blood about the heart through some vexation.

How comes the fundament of a man to close after he hath made water?

Because the air runs presently to fill that which is empty, and so the parts of the body are altered by the coldness of the air, which causes trembling.

Why have some men died thro' grief, some thro' joy, but more thro' anger?

Because joy cools the very inward guts; grief doth suffocate and

choake the inward parts, and cool the outward; but anger eats both, while heat remains: life and nature doth so too, because the soul is counted the life and natural heat.

Why do the voice change in people when they begin to have seed?

Because that heat is the beginning of veins and blood, as Aristotle saith against the physicians; and thereupon it raiseth that, because the change of the excrements of seed is made in the highest part of the body, the voice being above, makes it manifest: And thereupon it is the voices both of men and women do change when they begin to have seed.

How comes it that when a pot full of boiling liquor is seething, yet the bottom is cold?

It is because the hot vapours ascend upword, and therefore when the uppermost water is hot, the bottom is cold, by reason of the coldness of the water adjoining to it,

Why is the grain which we find in the ants holes gnawed at one end?

They are directed by nature to gnaw and consume that end where the virtue of feeding is, for fear it sprout again, lest by the sprouting and growing, they would be deprived of the nutriment belonging necessarily unto themselves.

Why do children love their mother more frequently than their father?

It is because they take great pains with them, or because of the great certainty which they have of themselves.

Why is not the father as well beloved of the son as the son is of the father?

It is, because love does not go backward, but always forward; whence our desire neglects things past, and looks to things to come. Or, it is because the father hath somewhat of his in the son, the son nothing of his in the father.

Why are asses more nimble when they are young, than at any other time?

Whether it is because their nature and constitution being melancholy, it is requisite there should be a temperance with the recompence of contrary qualities; for melancholy by nature is cold and dry, but when they are young, they are hot and moist. This also we see in melancholy children; some children are of great wit, before it be looked for, insomuch that you may hope and promise any thing in time to come, whose wit nevertheless, in progress of time, doth decay and fade. Be therefore, saith the Greeks, naught to the end that thou mayst live, for the nature of such is most short.

Why are there no asses in Pontus and Scythia?

It is because their nature is most impatient of cold, as philosophers do say.

Why are clergymen and women most covetous?

It is because the habit of virtue is bred of many actions, and therefore seeing that priests want wives and children, they are forced on ways to spend their goods, and yet are accustomed to take and receive, and so become covetous: for such as every man's actions are, such doth he become. The nature of women is imperfect, and therefore they think it impossible fully to satisfy themselves; they gather together, and keep that by which they may help their need; and by industry and art they covet to obtain that which nature does not give them And for the same reason, I suppose, old men give themselves to covetousness; for being destitute of helps by age and nature, they gripe after the goods of fortune, that with them they may provide for themselves against all wants.

Why do wounds grieve less in war than out of war?

It is because the powers of the soul bend another way: for, if our mind be strongly fixed on other matters, we do not see those things which are before our eyes; or, whether it is by reason of anger, which as wise men say, doth heat the internal and external part; and as Aristotle affirms, with the heat the soul works all things; and therefore it happens that the angry man grows but slowly whole after his wound, and therefore also doth less grieve and heat.

Why do we wonder at the eclipse of the sun and moon, and not at the generation of plants and beasts?

Whether it is because our admiration ceaseth in things that are usual, and our minds neglect to search out the truth in such things; or that which happens seldom, doth stir us up to wonder, and induceth the understanding to search out the cause.

How comes it that the headach, dulness of memory, and an evil disposition of imagination, doth follow the long detaining of the seed?

It is because it doth hinder and make heavy the brain by excess of seed; or because the seed long kept, gets some venomous quality, and therefore the fume and vapours of it doth hurt the head?

How is it that priests and monks fear and abhor death more than other men?

It is because they are by nature cold and melancholy; because they perceive themselves to perish utterly; for, when they are out of this world, they neither continue in their own nature nor in posterity.

Why though trees lose their leaves, beasts their hair, and birds their feathers, do they receive them again, when if a man becomes bald, his hair groweth no more?

It is because the time of the year doth bring that change of bodies: so that in the first change there floweth an interchangeable course one after another, and beasts receive their hair, birds their feathers, and trees their leaves: but baldness cometh to a man through age, and nature giveth no coming again to age.

Why doth summer end all diseases?

If force and nature be strong, it shall find air most fit for resolution, digestion, and expulsion of superfluities; if weak, the heat doth overthrow it more. It doth loosen weak bodies, and therefore there cometh nothing but death unto the sick.

Why if a man put his hands into the water in summer, is he colder if the water be moved, than when it standeth still?

It is because that part of the water which toucheth his hands is hot by the heat of his hand; for every agent which doth communicate with the patient in the things whereon he worketh, in doing so doth suffer again, and the water being moved, it is necessary that the parts of it which are rarified be scattered abroad, and others more cold succeed them.

Why do some who have an evil complexion and constitution of body live longer than some others, who are of a sanguine and better nature?

Whether it is through bad government and order; or because there is some hidden cause in those dispositions; for, as Averrois saith, the number of elements is infinite in works of nature, the which none besides the Author of nature doth understand.

What is the cause, that the suffocation of the matrix, which happens to women through strife and contention, is more dangerous than the detaining of flowers?

Whether it is because that by how much the more an excrement is perfect, so long as it doth continue in its natural disposition, by so much the more it is worse when it is removed from that, and drawn

to the contrary quality, as is ſeen in vinegar, which is the ſharpeſt when it is made of the beſt wine: And ſo it happens, that the more men love one another, the more they hate when they fall to variance and diſcord.

Why doth the land, which ſtandeth ſtill, ſeem to move unto ſuch as ſail by ſea?

It is becauſe the nutriment of the ſenſe of ſeeing is accidentally moved when the ſhip is moved, whereby the likeneſs and ſimilitude of things is perceived and received with the moving.

Why do we love our ſight above our ſenſes?

It is becauſe it both ſhews us the difference of things, and becauſe its knowledge is more drawn from material ſubſtance: Or, it is becauſe the divine force of love is placed in that ſenſe, as Plato ſaith.

Why do we not judge a ſtaff to be broken in the water, ſeeing it doth ſo appear in our ſight?

Becauſe we perceive by the ſenſe of feeling and touching, that the ſight doth err: Or, becauſe we do not judge with the ſame power, as we do imagine with. Thus the ſun doth ſeem to be but a foot round; and by a trick and moving of the finger, one finger doth ſeem two, yet we do not yield they be two.

Why do we put our hands over our eyes when we would ſee any thing afar off?

Becauſe the light ſhould not be diſperſed; and ſo thoſe who have their eyes ſtanding out, cannot ſee far; and contrary, ſuch as have them hollow in their head can ſee far, becauſe the moving of the ſight is not ſcattered.

How do ſome people diſcern things near them, and not at a diſtance?

It is through the weakneſs of the ſight, for in ſuch the power of ſeeing is very weak; therefore they do not need a ſtrong moving, as it is alſo in ſuch as have their eyes ſtanding out who cannot ſee far.

Why do ſuch as would ſhoot aright, wink with their one eye?

Becauſe thereby the ſight is more ſtrengthened and united.

Why are ſuch as have been long in the dark, if on a ſudden they come into the light, half blind?

Becauſe nature cannot endure thoſe ſudden mutations, or, becauſe the ſpirit of the ſight is ſmall and weak, and therefore is glad of the light, and ſo diſſolves when they come into the light. Or, becauſe of the deſire of that light they wanted before, which when they behold too earneſtly, their ſight is weakened, as it happens in ſome who have a long time endured famine, and then eating greedily, take more than they can digeſt, and ſo periſh.

Why can nothing be the cauſe of its own generation and corruption?

Becauſe the mover muſt be before the thing moved, and the engenderer before the things engendered; for it is impoſſible for any thing to be before itſelf.

How come women's bodies to be looſer, ſofter, and their veins leſſer than mens'? And why do they want hair?

By reaſon of their menſes; for with them their ſuperfluities, which would produce hair, go away; and where the fleſh is filled, conſequently their veins are more hid than mens'.

What is the reaſon that when we think upon an horrible thing we are ſtricken with fear.

Becauſe the conceit, and thinking of things hath force and virtue: for Plato ſaith, the reaſon of things hath ſome affinity with the things themſelves; for the image and repreſentation of cold and heat, is ſuch

as the nature of the things are: Or, becauſe when we comprehend any dreadful matter, the blood runs to the internal parts, and therefore the external parts are cold, and ſhake with fear.

Why doth a raddiſh root help digeſtion and yet itſelf remain undigeſted?

It is becauſe the ſubſtance conſiſteth of divers parts, for there are ſome thin parts in it which are fit to digeſt meat, the which being diſſolved, there doth remain ſome thick and cloſe ſubſtance in it, which the heart cannot digeſt.

Why do ſuch as cleave wood, cleave it eaſier in length than athwart?

Becauſe in wood there is a grain, if it be cut in length, whereby, in the very cutting, one part, draweth another faſt by it.

What is the reaſon, that if a ſpear be ſtricken, on the end, the ſound cometh ſooner to one who ſtandeth near, than to him who ſtriketh?

Becauſe there is a certain long grain in wood directly foreward filled with air; but croſs, or on the ſide, there is none: And therefore, when a beam or ſpear is ſtricken on the end, the air which is hidden receiveth a ſound in the aforeſaid grain which ſerveth for the paſſage of the air, and therefore ſeeing the ſound cannot go eaſily out, it is carried unto the ear of him who is oppoſite to him, and thoſe paſſages do not go from ſide to ſide, and therefore a ſound cannot be diſtinctly heard.

Why are they not famous men in every faculty in our age?

Becauſe the nature of man decayeth in our age; and ſucceſſion being corrupted, the progeny of our age is worſe by birth: Or, it is becauſe ſuch are not eſteemed of princes; for, take away the reward due unto virtue, and no man will embrace it; or, it is ordained by nature, that men do always complain of the preſent time.

Why are flatterers in great credit with princes?

Becauſe they love themſelves too much; immoderate love of themſelves cauſeth them to admit flatterers, and to give them credit: Or, it is becauſe they want the light or reaſon; for, among birds, ſome through the corruption of their nature, delight in ſtinking meat, and whom the day doth blind, the night doth lighten.

Why have philoſophers, for the moſt part, in theſe days, evil conditions?

Becauſe they are eſteemed of princes: Or, becauſe of the philoſophy itſelf, they are accuſed of crimes, and think therefore they are compelled to forſake virtue, and follow vice: or elſe deceived through error, they think they have ſnatched to themſelves ſome of her rags; and therefore they are by us rather called ſophiſters than philoſophers, for certainly a philoſopher ſhould be of a ſtout courage in all reſpects, and in all fortunes; but as they would be honoured of princes, and their deſire is not ruled by nature but by error, they are thirſt foreward with ſtreams of falſe credulity.

Why do ſuch as are angry, wax pale in the beginning and afterwards red?

It is through the deſire of revenge for that which grieveth, that the heat and blood are called unto the heart, and therefore, of neceſſity, the external parts are pale; when they are determined to put that in execution which they deſire, the heat and blood do run into the outward parts and then they are greatly to be feared.

Why do ſerpents want a yard and ſtones?

Becauſe they want thighs, therefore they want a yard and ſtones, and becauſe of the length of the body.

Why can ſerpents turn their heads backwards, and the reſt of the body ſtand ſtill?

Becauſe they are made of a winding compoſition, and have their

joints flexible, and made of griſtle; and alſo, that they may avoid all thoſe things which hurt them, for having no feet, and being long in body, they cannot eaſily turn themſelves, whilſt they bow againſt thoſe things which are behind them. It were to no purpoſe to lift up their head if they could not exerciſe anger.

Why is a camelion changed into many colours?

The cauſe is to be referred unto the quality of the mind, for, being the ſlendereſt of all four footed beaſts engendered of eggs, he is a ſtark cold for want of blood, and through overmuch coldneſs, he is of ſo many colours, for it is the property of fear to bind faſt through want of blood and heat.

Why are the thighs and calves of the legs of man fleſhy, ſeeing the legs of beaſts are not ſo?

Becauſe men only go upright, and therefore nature hath given to the lower part corpulency, and hath taken it away from the upper; and therefore the buttocks, thighs, and calves of the legs are fleſhy.

Why are the ſenſible powers in the heart, yet if the hinder part of the brain be hurt, the memory payeth for it: if the fore parts, the imagination: if the middle, the cogitative part?

Becauſe the brain is appointed by nature to cool the heat of the heart, wherefore, in divers of its parts, it ſerveth theſe powers and inſtruments of their heat; for every action of the ſoul doth not proceed from one meaſure of the heat.

The PROBLEMS of ALEX. APHRODISEUS.

Why doth the ſun make man black, and make dirt white: and make wax ſoft, and dirt hard?

By reaſon of the diſpoſition of the ſubſtance that doth ſuffer. All humours, phlegm excepted, when they are heated above meaſure, do ſeem black about the ſkin, but dirt being either full of ſaltpetre or ſalt liquor, when the ſun hath conſumed its dregs and filth, doth become white again; when the ſun hath drawn and ſtirred up the humidity of the wax, it is ſoftened: but in dirt the ſun doth conſume the humidity which is very much, and ſo doth try it and make it hard.

Why doth black choler, coming into the paps, cauſe a corroſion or gnawing: and in thoſe who are melancholy, it doth not but flies into the brain?

Becauſe there are many great veins in the paps by reaſon of engendering milk, and therefore ſtore of that humour doth run thither. But in the brain, becauſe it is above, and alſo becauſe it hath very ſmall veins, ſmall ſtore of choler doth aſcend, and which hath only power and force to prick and not to gnaw and eat. Moreover the brain is hard and moiſt, whereby it is, after a ſort contrary to the diſpoſition of black choler, which doth mortify it; that therefore which is properly called black choler both breed an eating and gnawing canker in the paps. In the brain it doth breed a man fierce and melancholy, but that which is not properly black choler, but melancholy humour, cauſeth a ſwelling only which is like a cancer but doth not gnaw and eat, and doth alſo breed a quiet and peaceable melancholy.

For what reaſon will not the water run out of the bottom of a watering pot, when we put our finger on the mouth of it, and the finger being taken away it runneth preſently?

Becauſe when the finger is taken away from the mouth of the pot, the air entering in doth thruſt down the water, which of its own nature

doth go downward, and ſo goeth out at the bottom. And this is the reaſon of all mechanical engines and inſtruments made to go by air and water, as clocks and hourglaſſes made by water.

Why doth wine and water given out of ſeaſon, to the ſick of an ague, cauſe a diſtemper of the brain, when the water is cold, and the wine is hot.

The wine being apt to aſcend, doth burn the brain at the time it is diſturbed and diſtempered with the ague. And we ſee alſo many who are in health, if they uſe much wine, to be ſcarce well in their wits. But water doth ſtop the paſſages of the body, by which the ſpirits are diſſolved, and ſo cauſes them to become thick and groſs, and more corrupt and putrefied, which breeds the ague. And oftentimes water being overcome by the ague, becometh its nouriſhment; as we ſee in a ſmith's forge, where a little water doth kindle the fire, and make it burn fiercer.

Why have women, children, and gelded men, ſhrill and loud voices?

Becauſe that through the abundance of humidity their artery is not ſtretched wide; and therefore, as a ſmall flute or pipe giveth a ſmall ſlender ſound, ſo does the aorta in them that is ſtrait and narrow; for it is the property of heat to make wide and looſen, but eunuchs and women are cold.

Why are children ſtricken with the planet in ſummer time?

They are ſick of a weak and lingering ague, and their eyes ſink hollow in their head, and they become weak and feeble, and ſleep very little: and ſome of them have a flux, becauſe children are tender, and ſo eaſily ſuffer: and having great ſtore of phlegm in the head, and that phlegm being overmuch heated, and alſo putrefied, doth inflame the ague, whereupon the griſtles of the brain are ſet on fire, and therefore they ſleep little; and that fire deſcending by the arteries of the heart, and ſetting on fire the lively ſpirits, doth kindle an ague; and ſeeing that much choler ariſes of an ague, thereby it falleth out, that the choler gnaweth and eateth the belly. It is plain, that the cauſe of that alteration is in the brain, becauſe that cooling medicines are applied unto the head, and ſuch as are good to quench that fire. Some of riper years are ſick of the ſame diſeaſe, that is ſuch as have phlegm and choler heaped up into their head, which putrefies by the very breathing thereof, and after a manner, the ſpirits are ſet on fire by a fiery air.

Why are round ulcers hard to be cured?

Becauſe they are bred of ſharp choler, which eats and gnaws, and becauſe it doth run, for which reaſon it requires drying medicines, as phyſicians aſſert. Natural philoſophers ſay, it comes to paſs becauſe there is beginning where the miſchevious impoſthume doth begin, for in a circle there is neither beginning nor end. When they are burned by phyſicians, they do aſſume another kind of ſhape.

Why is honey ſweet to all men, and yet ſeemeth bitter to ſuch as have the jaundice?

Becauſe they have much bitter choler all over their bodies, but it abounds with the tongue, whence it happens when they eat honey the humours are ſtirred, and the taſte itſelf, when it hath found the bitterneſs of choler, cauſes an imagination that the honey is bitter.

Why have very angry men fiery eyes?

Becauſe the blood about the heart is fervent, and the ſpirit hot, and ſo, being very ſubtle and pure, and carried upwards and by the eyes,

which are clear, they do shine, and have bloody vapours that ascend with them, which makes the face red, which Homer not being ignorant of, says, *And his eyes were like a burning flame.*

Why doth water cast upon serpents cause them to fly from us?

Because they are cold and dry by nature, having but little blood, and therefore fly from excessive coldness. And that they be of this quality is plain, because they seek for dens and secret places in the earth, as being warm: at sun set they shun the air, as being cold; and again in summer, because the bowels of the earth are cold they find out the warmest places.

Why doth an egg break if it be roasted, and not if boiled?

The reason is when moisture comes near the fire, it heats it too much, and so breeds much wind, which being pent up in a little, forceth its way out, and so breaks the shell. The like happens in tubs, or earthen vessels, when new wine is put in them. Too much phlegm breaks the shell of an egg in roasting, the which doth happen in earthen pots too much heated; wherefore the common people wet an egg when they intend to roast it. Hot water, through its softness, doth separate its humidity by little and little, and so dissolves it through the passages that are in the shells.

Why do men, in the act of carnal copulation, in a manner wink and find a like alteration in all senses?

Because that being overcome with the effect of that pleasure, they do comprehead it better, winking as it were with their eyes. They are not lifted up, nor do carry the wind abroad into the air with the senses, whereby they would discern those corporeal affections.

Why have some medicines of one kind, contrary forces, as experience doth teach, mastic doth expel, dissolve, and so knit; vinegar both cools and heats?

Because there are some small invisible bodies of them, not by confusion but by interposition; as sand moistened doth clog together, and seems to be but one body, though indeed there are many small bodies in sand. Since this is so, it is not absurd that contrary qualities and virtues should be hidden in mastic, and nature hath given the law to these bodies.

Why do our privities swell when we hurt one of our toes?

Nature caring for those things which belong to the body, hastes to assist the part grieved and because she hath the most profitable and nourishing of all the humours, it is requisite when she doth descend to the toe with the blood, that those veins be filled which are about the privy members.

Why doth not nature give birds a bladder, or a receptacle for urine?

Because they do want much moisture to give the matter for feathers to grow, and that they do consume with the exercise of flying; neither do they piss, at all, and when they drink they void very much dung.

Why have children gravel breeding in their bladder, and old men in their kidneys, and reins of the kidneys.

Because children have straight Passages in the kidneys, and an earthly thick humour is thirst with violence by the urine from the fashion of the moon, even to the bladder, which hath wide conduits or passages that give room for the urine and humour, whereof gravel is engendered, to wax thick and seat itself, as the custom of it is. In old men it is the reverse, for they have wide passages of the reins, back, and kidneys, that the urine may pass away, and the earthy humour

congeal and ſink down; the colour of the gravel ſhews the humour whereof the ſtones come.

Why, if the ſtone do congeal and wax hard through heat, (children are hot, and by the ſame reaſon it is done in old men, for there is not ſo much cold to be granted as there is in ice or ſnow, through which extreme cold the kidneys would periſh) yet we uſe not contrary things to diſſolve coldneſs, but light things, as parſley, fennel, and ſuch like?

They ſay it falleth out that by exceſſive heat and ſcorching, the ſtones do crumble into ſand, as in earthen veſſels, which when they are overheated or roaſted, they become ſand. And by this means it happens that ſmall ſtones are voided together with ſand in making water. Sometimes cold drinks thruſt out the ſtone, the kidneys being ſtretched, and caſting out by a greater laſk, and eaſing the belly of its burden. Beſides it often happens that an immoderate heat of the kidneys or of the reins of the back (through which the ſtone doth grow) is quenched with coldneſs.

Why is the curing an ulcer or boil in the kidneys or bladder very hard?

Becauſe the urine being very ſharp, doth exulcerate the wound, while good and fit medicaments would cover the ſkin. Ulcers are harder to cure in the bladder than in the kidneys, becauſe urine ſtays in the former, but runs away from the latter.

What is the reaſon that in bathing veſſels, the hot water, when it is ſtirred, ſeems the hotter to us, almoſt burning our bodies?

Becauſe, when we enter theſe ſort of baths, the water itſelf doth ſuffer, that is, when the water heats our bodies it is made colder by us. We have learned that whatever works in generation of corruption, the ſame (without all doubt) doth ſuffer; the water then being in ſome ſort cooled, doth not heat alike, and we being accuſtomed to it, do not feel the heat as we did in the beginning, becauſe it is diminiſhed. If, by ſtirring the water, more heat is added, which neither hath yet wrought or ſuffered any thing of the body which is in it, that will ſeem very hot and ſcalding, in regard that it ſuffers by ſomething, and ſo by degrees looſes its heat, as the firſt did.

How is it, that whatſoever is moved, is hotter for it, eſpecially in ſummer, when the heat of the ſun is moſt violent?

This ſeems a contradiction to the other; for hot water did not ſeem hotter to us by moving. Therefore, it is a common thing for what is moſt and principal in any thing, either in quantity or quality, to overcome and change that which is leſs and weaker; and that which is ſtrong doth ſomewhat ſuffer again in doing. Wherefore the hot water, when it is very hot, ſticking to the hot body, cools, and does not retain the ſame quality. The air then, which doth compaſs us about, being hot in ſummer like the water compaſſing our bodies, is ſomewhat heated by us, who are hot through the ſeaſon: it heats us as linen garments do, which being firſt cold, and then ſtirred, that air which was before heated by us is driven away, and another, not heated, ſucceeds and ſeems cold to us.

Why do thoſe ſores which breed in the ball of the eye ſeem white, when they have leſs growing, and are cold, and others do not ſeem ſo that grow out of the ball?

Becauſe through the ball of the eye the ſight proceedeth, which is bright and clear, therefore in the white of the eye, when the wound doth make thick that part of the covering which is like a horn, the ſpirit of the ſight cannot iſſue out; hence it comes to paſs (much of

it being got together) it makes the wound light and clear ſhewing it white; and becauſe of the quietneſs of the ſight, the ſpirit cannot go out, it cauſes blindneſs.

Why doth chaff and ſtraw keep water hot, and ſnow cold, which are ſeemingly contraries?

Becauſe the nature of chaff wants a manifeſt quality; ſeeing therefore, that of their nature, they can eaſily be mingled, and conſumed with that which they are annexed unto, they eaſily alſo take the ſame nature unto them; and therefore being put into hot things, they are eaſily hot, and do heat again, and keep hot; and, on the contrary, being made cold of the ſnow, and making the ſnow cold, do keep in its coldneſs. So wax and oil will eaſily be conſumed, and made one with another thing, and do help the quality which is mingled with them, as being made one with them.

Why do the ſtars and heaven ſeem cleareſt in the bright winter time?

Becauſe the air, either which doth compaſs us, or that which is higheſt, is made thin and purged with winds and ſhowers of rain, and by that means our ſight doth ſee both further and clearer. The like is manifeſtly ſeen in running rivers; for ſuch things as are in them are far better ſeen than in the thick ſtanding puddle of water, where either nothing is ſeen, or confuſedly.

Why have we oftentimes a pain in making water?

Becauſe that ſharp choler iſſuing out and pricking the bladder of the urine, doth provoke and ſtir up the whole body to eaſe the part offended, and to expel the humour moderately. This doth happen moſtly to children, becauſe they have moiſt excrements, by reaſon of their often filling.

Why do nurſes rock and move their children when they would have them to ſleep?

To the end that the humours, being ſcattered by moving, may move the brains; but thoſe of more years cannot endure this.

Why do ſome drunkards ſee double?

Becauſe the muſcles of the ſight being more or leſs filled, and by the ſelf ſame means weak and feeble, do draw one eye upward, and the other downward, and by that means the beams do not look that way at once, but toward divers places and bodies; and therefore, each of the eyes uſing a private office and duty of ſeeing, doth cauſe a double ſight.

Why are boys apt to change their voices about fourteen years of age?

Becauſe that then nature doth cauſe a great and ſudden change of age; experience proveth this to be true, for at that time we may ſee that womens' paps do grow great to hold and gather milk, and alſo thoſe places that are above the hips, in which the young fruit ſhould remain. Likewiſe mens' breaſts and ſhoulders, which bear then great and heavy burdens. Alſo their ſtones in which their ſeed may increaſe and abide, and their privy members, to let out the ſeed and eaſe. Further, all the whole body is made larger and dilated, as the alteration and change of every part doth teſtify, and the harſhneſs of the voice and hoarſeneſs; for the rough artery, the wind pipe, being made wide in the beginning, and the exterior and outward part within unequal to the throat, the air going out at the rough, unequal and uneven pipe, doth become unequal and ſharp, and after a ſort hoarſe like unto the voice of a goat, wherefore it has its name *Bronchus*. The ſame doth happen to them unto whoſe rough artery diſtillation

doth flow: It happens by reason of the drooping humidity that a light small skin filled unequally causes the uneven going forth of the spirit and air. Understand that the wine pipe of goats is such by reason of the abundance of humidity. The like doth happen unto all such as nature hath given a rough artery, as unto cranes. After the years of fourteen they leave off that voice, because the artery is made wider, and reacheth its natural evenness and quality.

Why doth oil, being drank cause one to vomit, and especially yellow choler

Because that seeing it is light, and ascending upwards, it provoketh the nutriment in the stomach, and lifteth it up, and so the stomach being grieved, summoneth the ejective virtue to vomit, and especially choler, because that is light, and consisteth of subtle parts and therefore it is the sooner carried upward; for when it is mingled with any moist thing, it runneth into the highest room.

Why doth not oil mingle with moist things?

Because that being pliant, soft, and constipate in itself, it cannot be divided into parts, and so cannot be mingled; neither if it be put on earth, cannot it enter into it.

Why is water and oil frozen in cold weather, and wine and vinegar in hot?

Because that oil being without all quality, and fit to be compounded with any thing, is cold quickly, and so extremely, that it is most cold. Water being cold of nature, doth easily freeze when it is made colder than its own nature. Wine being hot, and of subtle parts, is not so soon cold, but vinegar being of most subtle parts, suffereth no freezing.

Why do contrary things in quality produce the same effect?

That which is moist is hardened, and abounds alike of heat and of cold. Snow and liquids do freeze with cold; a plaister and gravel in the bladder, are made hot with heat. The heat doth consume and eat the abundance of moisture; but the cold stopping and shutting with its overmuch thickness, doth wring out the filthy humidity, like as the sponge wrung with the hand doth cast out the water which it hath in the pores or small passages.

Why doth a shaking or quivering seize us oftentimes, when any fearful matter doth happen, as a great noise or a crack made the sudden downfal of water or a great tree?

Because that oftentimes the humours being digested and consumed with time, and made thin and weak, all the heat vehemently, suddenly, and sharply flying into the inward part of the body, consumeth the humours which caused the disease. So treacle hath its effect, and many such like, which are hot and dry, when they are taken after concoction.

Why do steel glasses shine so clearly?

Because they are lined in the inside with white led, whose nature is shining, which being put to the glass, which is also shining, doth shine much more; and casting its beams through the passages of the glass, doth double that which is in the superficial parts of the glass, and without the body of the glass, and by that means the glass is very shining and clear.

Why do we see ourselves in glasses and clear water?

Because the quality of the sight passing into the bright bodies by reflection, doth turn again by the beam of the eyes, as the image of him who looked on it. That qualities do go forth and pass from the face, as it is not absurd, they do shew which remain near unto trees, because

they are wont to look green, for the green quality of green leaves paſſeth to the face of itſelf; likewiſe going into the running water doth make it ſhew green.

Why do hard dens, hollow and high places, ſend back the likeneſs and ſound of the voice?

Becauſe that in ſuch places reflection turns back the image of a ſound; for the voice doth beat the air, and the air the place, which the more it is beaten the more it doth beat, and therefore doth cauſe the more vehement ſound of the voice; moiſt places, and as it were ſoft, yielding to the ſtroke and diſſolving it, give no ſound again; for, according to the quality and quantity of the ſtroke, the quality and quantity of the voice is given, which is called an echo. Some doubly fable, that ſhe is a goddeſs; ſome ſay that Pan was in love with her, which without doubt is falſe. He was ſome wiſe man, who did firſt deſire to ſearch out the cauſe of that voice; and as they who love, and cannot enjoy their love, are grieved, ſo, in like manner, was he very ſorry until he found out the ſolution of that cauſe: As Endymion alſo, who firſt found out the courſe of the moon, watching a night, and obſerving her courſe, and ſearching her motion, did ſleep in the day time, and therefore they do fable that he was beloved of her, and that ſhe came to him when he was a ſleep, becauſe ſhe did give to the philoſopher the ſolution of the courſe of herſelf. They ſay alſo, that he was a ſhepherd, becauſe, that in the deſart and high places, he did mark the courſe of the moon. And they give him alſo the pipe, becauſe the high places are blown with wind, or elſe, becauſe he ſought out the conſonancy of figures. Prometheus alſo being a wiſe man, ſought the courſe of the ſtar, which is called the eagle in the firmament, his nature and place; and when he was, as it were, waſted with the deſire of learning, then at the laſt he reſted, when Hercules did reſolve unto him all doubts with his wiſdom.

What is the reaſon that if you caſt a ſtone into a ſtanding water, it makes many circles, and not if the water be deep in the earth?

Becauſe that the ſtone with the vehemence of the caſt doth purſue and follow the water from every part of it, until the ſtone come to the bottom; for if there be a very great vehemency in the throw, the circle is the greater, the ſtone going down unto the earth, cauſeth many circles. For firſt of all, it doth drive the overmoſt and ſuperficial parts of the water into many parts, and ſo going down always to the bottom, again dividing the water it maketh into another circle, and this is done ſucceſſively, until the ſtone reſteth; and becauſe the vehemency of the ſtone is ſlackened, ſtill as it goes down, of neceſſity the laſt circle is leſſer than the firſt, becauſe that with the ſtone and alſo with the body, the water is divided.

Why do ſome think that laughter proceeds from the ſpleen, affirming that it is not like that they laugh as much, whoſe ſpleen is corrupted, as they whoſe ſpleen is ſound, but ſay that ſuch are very ſad?

Truly, I think that the cauſe of laughter is accidental, and not properly the ſpleen; for, if it be ſound and perfect, it doth draw from the liver melancholy humours, whereof it proceedeth, that when the pure blood, without any dregs, doth go through the whole body, and alſo in the brain it doth delight both nature and mind, and doth make men merry like unto wine, and bring them to a quietneſs and tranquility, and ſo that of laughter is moved.

Why do not mules bring forth young ones?

Because they proceed of divers kinds of beasts, and so then the mixture of seed differing in quality and quantity, begets a certain other thing; besides, that which is first doth mar and abolish the nature of those things which were last, as the mingling of white and black, abolishing the colour of excrements, breedeth another colour which is dark and dun, which is none at all of the extreme; therefore, the engendering quality is abolished, and the aptness of receiving form.

Why are such as are deaf by nature dumb?

Because they cannot speak and express that which they never heard; some physicians say, that there is one knitting and uniting of sinews belonging to the like disposition. But such as are dumb by an accident, are not deaf at all, for then there ariseth a local passion.

Why do not swine cry when they are carried with their snouts upwards?

Because that above all other beasts they bend more than others to the earth. They delight in filth, and that they seek, and therefore in the sudden change of their face, they are as it were strangers: and being amazed with so much light, do keep silence; some say the wind pipe doth close together by reason of the straitness of it.

Why do swine delight in dirt?

As the physicians say; they are naturally delighted with it, because they have a great liver, in which desire is; the wideness of their snout is the cause, for he hath smelling which doth dissolve itself, and as it were strive with stench.

Why doth itching arise when an ulcer doth wax whole, and phlegm cease?

Because the part which is healed and made sound doth pursue the relick of the humours which remaineth there against nature, and which was the cause of the boil, and so going out through the skin, and dissolving itself, doth originally cause the itch.

Why are those diseases and accidents longest and most grievous which molest one eye, and not both?

For two reasons: first, because a running fluxion is heaped up at one eye only; for, whatsoever is divided into many, is weaker than when entire, and of a lesser force; secondly, because, when the whole eye doth make any motion, it often obliges the ailing eye to move too, and the help for any diseased part consists in quietude.

How comes a man to sneeze oftener and more vehemently than a beast?

Because he uses more meats and drinks, and of more different sorts, and that more than requisite, which when he cannot digest as he would, he doth gather together much air and spirit, by reason of much humidity, the spirits being then very subtle, ascending into the head, often forces a man to void it, and so provoke sneezing. The noise caused thereby proceeds from a vehement spirit or breath passing through the conduits of the nostrils, as belching does by the stomach, or f—g by the fundament, the voice by the throat, and a sound by the ears.

How come the hair and nails of dead people to grow?

Because the flesh rotting, withering, falling away, that which was hidden about the root of the hair doth now appear, and causes an imagination that the hair doth grow; some say it grows indeed, because the dead carcasses are dissolved, in the beginning, to many excrements and superfluities, by reason of the putrification which comes to them. These going out at the uppermost part of the body by some passages do increase the growth of the hair.

Why doth not the hair of the feet grow presently grey?

Becauſe that through great motion they diſperſe and diſſolve the ſuperfluous phlegm that breeds greyneſs. The hair of the ſecrets doth grow grey very late, becauſe of the heat of that place, and becauſe that in carnal copulation it does diſſolve the phlegm alſo.

Why do many beaſts wag their tails when they ſee their friends, and a lion and a bull beat their ſides when they are angry?

Becauſe they have the marrow of their backs reaching to the tail, which hath the force of motion in it, the imagination acknowledges that which is known to them, doth force them to move their tail, as men do their hands. This doth manifeſtly ſhew ſome ſecret force to be within them, which doth acknowledge what they ought. In the anger of lions and bulls, nature doth conſent to the mind, and cauſeth it to be greatly moved, as men do ſometimes when they are angry beating their hands on other parts; when the mind cannot be revenged on that which doth hurt, it preſently ſeeks out ſome other ſolace, and cures the malady with a ſtroke or blow.

Why, if you put hot burnt barley upon a horſe's ſore, is the hair which grows upon the ſore not white, but like the other hair?

Becauſe it hath the force of expelling, and doth wipe away and diſſolve the excrements of phlegm, as likewiſe all unprofitable matter that is gathered together through the weakneſs of the parts, or crudity of the ſore.

Why doth hair never grow on an ulcer or a boil?

The reaſon is, a man hath a thick ſkin, as is ſeen by the thickneſs of the hair: and ſince the ſcar is thicker than the ſkin itſelf, it ſtops the paſſage from whence the hair ſhould grow. Horſes have thinner ſkins, as is plain by the thick hair: therefore, all paſſages are not ſtopt in their wounds and ſores, and after the excrements, which were gathered together, have broke a paſſage through thoſe ſmall pores, the hair doth grow.

What is the reaſon that ſuch as are bitten with a ſnake, if they are thirſty, quench it by drinking of treacle, which is hot and dry?

I ſay then, it doth not quench thirſt ſolely by its own quality, but by ſome mutual ſympathy and conſent, and natural reaſon. It is a kind of counter-poiſon, and a preſervative too, being compoſed of divers ſorts of herbs that have ſome kind of agreement with all the parts of the body, as dictamnum, dittanger, or ginger, hath a proportionable conſervative of the heart; agrimony or liver-wort with the liver; ſtone-wort or finger fern with the ſpleen; perſley with the mouth of the belly; hyſſop with the lungs; elicampane with the reins of the back: rue with the neck; bitterworth the brain; and ſiler montanum with the bladder. Every one of theſe drawn as it were with the ſweetneſs of honey, doth draw that which is beſt for his ſafety: among all of theſe the blood of ſome vipers is mingled, which hath a certain natural diſaffection, which we call antipharmicum, a contrary of all natural qualities againſt every venomous beaſt and corruptible creature. Theſe being diſtributed into every part they ſuffer nothing to work that effect which doth threaten corruption, for they do reſiſt, like the lawful ſoldiers who have taken arms for the defence of their country.

Why is fortune painted with a double forehead, one ſide bald, and the other hairy?

The baldneſs ſignifies adverſity, and hairineſs proſperity, which we enjoy when it pleaſes her.

Why have ſome commended flattery?

Becauſe flattery ſetteth forth before our eyes what we ought to be, though not what we are.

Wherefore ſhould virtue be painted girded?

To ſhew that virtuous men ſhould not be ſlothful, but diligent, and always in action.

Why did the ancients ſay it was better to fall into the hands of a raven, than a flatterer?

Becauſe the ravens don't eat us till we be dead, but flatterers devour us alive.

Why have choleric men beards before others?

Becauſe they are hot, and their pores large and wide.

How comes it that ſuch as have the hickup do eaſe themſelves by holding their breath?

The breath retained doth heat the interior parts of the body, and the hickup proceeds from nothing but cold.

How comes it that old men remember well that which they ſaw and did in their youth, and forget ſuch things as they ſee and do in their age?

Things learned in youth have taken root and habituate in the perſon, but thoſe learnt in age are forgotten, becauſe the ſenſes are weakened in them.

What kind of covetouſneſs is beſt?

That of time, when it is employed as it ought to be.

Why is our life compared to a ſtage play?

Becauſe the diſhoneſt do occupy the place of the honeſt, and the worſt ſort the room of the good.

Why do dolphins, when they appear above the water denote ſome ſtorm or tempeſt approaching?

Becauſe that, at the beginning of the tempeſt, their do ariſe from the bottom of the ſea certain hot exhalations and vapours which heat the dolphins cauſing them to riſe up and ſeek for cold.

Why are things more quiet in the night than in the day?

The motion of the air, and the coldneſs of the night, is the cauſe thereof, which coldneſs continues and hinders the motions.

How come the Romans to call Fabius Maximus the target of the people, and Marcellus the ſword?

Becauſe the one adapted himſelf to the ſervice of the commonwealth, and the other was very eager to revenge the injuries of his country; and yet they were in the ſenate joined together, becauſe the gravity of the one would moderate the courage and bravery of the other.

Why does the ſhining of the moon hurt the head?

Becauſe it moves the humours of the brain and cannot afterwards reſolve them.

If water do not nouriſh why do men drink it?

Water cauſes the nutriment to ſpread through the body.

Why is ſneezing good?

It purgeth the brain, as milk is purged by the cough.

Where is the ſeat of the affections of the body?

Joy dwelleth in the ſpleen, anger in the gall, fear in the heart, and lechery in the liver.

Why is hot water lighter than cold?

Becauſe the boiling water has leſs ventoſity, and is more light and ſubtle, the earthy and heavy ſubſtance being ſeparated from it.

How come marſh and pond water to be evil?

By reaſon they are phlegmatic, and do corrupt in ſummar time, the fineneſs of the water is turned into vapours, and the earthineſs doth remain.

Why are ſtudious and learned men ſooneſt bald ?

It proceeds from a weakneſs of the ſpirits, or becauſe warmth of digeſtion cauſes phlegm to abound in them.

Why doth too much watching make the brain feeble ?

Becauſe it increaſes choler, which dries and extenuates the body.

Why are ſteel glaſſes better for the ſight than others ?

Steel is hard, and doth preſent unto us more ſubſtantially the air that receiveth the light.

How doth love ſhew its greateſt force, by making the fool to become wiſe, or the wiſe become a fool ?

It attributes wiſdom to him that hath it not ; for it is harder to build than to pull down, and ordinary love and folly are but an alteration of the mind.

How comes too much labour to be bad for the ſight ?

Becauſe it dries the blood too much.

Why is goats milk counted beſt for the ſtomach ?

Becauſe it is thick, not ſlimy, and they feed upon boughs and wood rather than graſs.

Why do grief and vexation bring grey hairs ?

Becauſe it dries, and age is nothing elſe.

How is he the moſt merry that hath the thickeſt blood ?

The blood which is fat and thick makes the ſpirits firm and conſtant, wherein conſiſts the force of all creatures.

In your opinion which is hardeſt to obtain the love of a perſon, or to keep it when obtained ?

To keep it, by reaſon of the inconſtancy of man, who is quickly angry, and ſoon weary of a thing ; hard to be got and ſlippery to keep.

Why do ſerpents ſhun the herb rue ?

Becauſe they are cold, dry, and full of ſinews, but the herb rue is of a contrary nature.

How comes a capon better to eat than a cock ?

The capon loſes not his moiſture, becauſe he does not tread the hens and therefore is better.

Why do we ſmell a thing leſs in the winter than in the ſummer ?

Becauſe the air is thick, and leſs moveable.

How comes hair to burn ſo quick as it does ?

Becauſe the hair is dry and cold.

Why is love compared to labarinth ?

Becauſe the entry and coming in is eaſy, and the going out impoſſible, or very hard.

THE END.

ARISTOTLE's

LAST LEGACY,

UNFOLDING THE

MYSTERIES OF NATURE

IN THE

GENERATION OF MAN.

TREATING,

I. Of VIRGINITY, its SIGNS and TOKENS, and how a MAN may know whether he hath MARRIED a VIRGIN or not.

II. Of the ORGAN of GENERATION in WOMEN, with a deſcription of the WOMB.

III. Of the USE and ACTION of the GENITALS in the WORK of GENERATION.

IV. Of CONCEPTION; and how to know whether a WOMAN has CONCEIVED, and whether of a MALE or FEMALE.

V. Of the PLEASURE and ADVANTAGE of MARRIAGE; with the unhappy CONSEQUENCES of unequal MATCHES, and MISERIES of UNLAWFUL LOVE.

VI. Of BARRENNESS, with REMEDIES againſt it; and the SIGNS of the INSUFFICIENCY both in MEN and WOMEN.

VII. DIRECTIONS to both SEXES how to manage themſelves in the ACT of COITION, or their VENEREAL EMBRACES.

VIII. A VADE-MECUM for MIDWIVES and NURSES; Containing particular DIRECTIONS for the faithful DISCHARGE of their ſeveral EMPLOYMENTS.

IX. EXCELLENT REMEDIES againſt all DISEASES incident to VIRGINS and CHILDBEARING WOMEN: fitted for the uſe of MIDWIVES, &c.

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WHEN the Almighty Architect of the world had formed the heaven in the beginning, and laid the foundation of the earth, and by his blessed Spirit moving upon the abyss, had created a fair and beautiful world, out of a rude mass and undigested chaos, and by his powerful fiat had brought into being all the several species of vegetables and animals, and given even to the plants and vegetables to have seed in themselves for producing their several kinds or forms, and to the animals (which he created male, and female) the power of propagating their species, and had adorned the world with all these beautiful and glorious embellishments, that his omnipotent wisdom and goodness saw fit and requisite for that great guest he designed to bring into it; he at last created man as a microcosm, or lesser world, to be lord of this greater world, not with a bare fiat only, as he did the rest of his creatures, but called (as it were) a council of the sacred Trinity about it, saying, Let us make man in our own image, after our own likeness, &c. as the divine historian expresses: so that man, in his original, is a ray of the divinity, and the very breath of the Almighty; and therefore it is said, God breathed into his nostrils the breath of life, and he became a living soul. Man being thus created, and made lord of the world, had in himself at first both sexes, for the text tells us, Male and female created he them, and called their name Adam: but yet till Adam was divided he was still alone; and every creature had a mate, he was lord of all; so that in paradise itself he seemed to be unhappy, wanting a meet help; and therefore his munificent Maker resolving to make him completely happy, divides himself from himself, that, by a more agreeable conjunction, he might be united to himself again; and so of a part of himself was formed Eve, whom Adam, having never seen before, by a sympathy of nature, presently called, bone of his bone, and flesh of his flesh: and Adam having thus found a meet help given him by his Creator, he was now completely happy, and being blessed by the Almighty, had this love also given him, to increase and multiply, he being endowed with a natural propension thereunto, and the women having a plastic power given her by nature for the formation of the embryo. This natural inclination and propension of both sexes to each other, with the plastic power of nature, is only the energy of the first blessing and command of the Almighty, which to this day upholds the world.

The mystery of the generation of that noblest piece of creation man, and the unfolding of the plastic power of nature, in the secret workings of generation, and formation of the seed in the womb, is the subject of the following treatise: a subject so necessary to be known by all the female sex (the conception and bearing of children being that which nature has ordained their province) that many, for want of the knowledge hereof perish, with the fruit of their womb also, who, had they but understood the secrets of generation displayed in this book, might have been still in the land of the living.

'Tis therefore for the use of such that this treatise is compiled: wherein the mystery of generation is not only unravelled, and the abstruse secrets of nature made known, but the obstructions and hinderances of generation are declared, and proper remedies against all the defects of the womb directed.

If any say there are already books enough of this nature and extent; I answer, there are indeed more books of this kind written than can be read by those that most want them: some are so voluminous, that to read them takes up more time than most can spare; and besides, are written in those abstruse terms, that the female sex (I mean the generality of them) can hardly understand; whereas, this is adapted to their capacities, and suited to their leisure time, consisting of plainness and brevity. And if the last words of men ought to be most heeded, as being the truest index of their minds, and their most correct thoughts, I need not doubt but that Aristotle's last Legacy will find acceptance, his other works, not so correct as this, having been well received. I have no more to say, but that I hope the reader will make the good use of it, and receive that benefit by it which was designed by the writer.

Ariſtotle's Laſt Legacy.

Fully unfolding the MYSTERIES of NATURE in the GENERATION of MAN.

Of Virginity, what it is, its Signs and Tokens, and how a man may know if he marries a virgin.

THE great maker of the univerſe, that gives all creatures life and being, and a power in themſelves to propagate their kind, even to the end of the world, has to that end created them male and female, and theſe of contrary qualities; for, in this noble pair, man and woman, the man is hot and dry, the woman cold and moiſt; and theſe two different qualities uniting, are ordained by nature for the procreation of children, the ſeed of the man being the efficient cauſe, and the womb of the woman the field of generation, wherein the ſeed is nouriſhed, and the embryo formed, and in due time brought forth.

Since women then have ſo great part in the generation of man, I ſhall endeavour to ſhew how nature has fitted them for it; and, becauſe a knowledge of the diſeaſe is half the cure, I will give a brief deſcription of the ſeveral parts or members of generation, that ſo if, at any time, any part be affected, or out of order, it may be ſooner rectified: And although I muſt uſe plainneſs, yet I hope to do it ſo as not to cauſe a guilty bluſh on the cheek of the fair ſex.

And, ſince the firſt ſtate of woman is virginity, order and method require that I ſpeak ſomething of that; and in ſpeaking on it, I will firſt ſhew what it is, and then lay down ſome ſigns and tokens of it, how it may be known, and then proceed to what I have before promiſed.

Virginity is the boaſt and pride of the fair ſex, though they generally commend it to put it off, and that they may the ſooner get a good huſband, and thereby loſe it: And I think they are in the right, for, if they keep it too long, it grows uſeleſs, or at leaſt abates much of its value; a ſtale virgin being looked upon like an old almanack out of date. Virginity is the chief, the beſt, the prime of any thing, and is properly the integrity of womens' privities, not violated by man, or known by him, it being the property of a virgin not to have known man. But to come a little more cloſe, there is in young maidens, in the neck of the womb, a pendulous production called the Hymen, which is like the bud of a roſe half blown, and this is broke in the firſt act of copulation with a man, and from thence the word *defloro*, to deflower, becauſe the taking away of virginity is deflowering a virgin, for when the roſe bud is expanded, virginity is wholly loſt. Certain it is, there is, in the firſt act of copulation, ſomething which cauſeth pain and bleeding, which is an evident ſign of virginity, but, what this is, authors agree not: Some ſay it is a nervous membrane, or thin ſkin, with ſmall veins, which bleed at the firſt penetration of the yard: Others ſay it is four carnucles, or bits of fleſh, or little buds like myrtle-berries, and theſe are plump and full in virgins, but hang looſe and flag in thoſe that have uſed copulation: Some have obſerved a fleſhy circle about the nymphæ or neck of the womb, with little obſcure veins, which make the membrane not to be nervous, but fleſhy.

There is no doubt but that the part which receiveth the yard is not in women that have uſed a man, as it is in virgins, and yet it is not alike in all, which hath cauſed diverſity of opinions both in authors and anatomiſts, for this is not found in all virgins: Exceſs of luſt, and deſire of a

man, in some, may break the hymen, or clauſtrum virginale; ſometimes when it itcheth, they put in their finger, and ſo break it; ſometimes the midwives break it in the birth; and ſometimes it is done by ſtopping of the urine, coughing, violent ſtraining, or ſneezing; and therefore, if there be no bleeding at the firſt penetration, it is not always a ſign of unchaſtity; but where there is bleeding it is an unqueſtionable ſign of virginity.

Leo Africanus makes mention of a cuſtom of the Africans at their weddings, which was this: After they were married, the bridegroom and the bride were ſhut up in a chamber, whilſt the wedding dinner was preparing, and an old woman ſtood at the chamber door to receive from the bridegroom a ſheet, having the bloody tokens of the wife's virginity, which ſhe ſhewed in triumph to all the gueſts, and then they might feaſt with joy; but if there was no blood to be ſeen, the bride was ſent home with diſgrace, and the diſappointed gueſts went home ſadly without their dinner. But notwithſtanding the African cuſtom, I affirm that ſome honeſt virgins have loſt their maidenheads without bleeding and therefore are not to be cenſured for want of this token, as ſome ignorant men may do, and cauſe their wives to live an uncomfortable life all their days, fancying themſelves to be cuckolds, when there is no ſuch matter.

Some make the ſtraitneſs of the privities to be a ſign of virginity, but this is no certain rule, for much depends upon the age, habit of body, and other circumſtances: Though it cannot but be acknowledged, that women that have uſed carnal copulation are not ſo ſtrait as virgins, yet this can be no certain argument of virginity, for, after repeated acts of venery, the privities may be made ſo ſtrait by the uſe of aſtringent medicines, that a whore may be ſometimes taken for a virgin. Culpepper mentions a woman that deſiring to appear a virgin, uſed a bath of comfrey roots, whereby ſhe deceived thoſe with whom ſhe had to do.

Some make milk in the breaſt a ſign of loſt virginity, not conſidering there is a two-fold milk, the one of virgins contrary to nature, the other natural: The firſt is made of blood that cannot get out of the womb, and ſo goes to the breaſts, being nothing but a ſuperfluous nouriſhment that is turned into milk by the faculty of the breaſts, without the knowledge of a man; the other is only when there is a child either in the womb, or born: And the milk differs very much, both in reſpect of the blood and diverſity of veins that bring it to the breaſt; and though both are white, yet that of virgins is thinner, leſs in quantity, and not ſo ſweet: and therefore, if virgins happen to have ſuch milk, they are not for that reaſon to be deemed unchaſte.

Upon the whole, when a man marries, and finds, upon lying with his wife, the tokens of her virginity, he has all the reaſon in the world to be ſatisfied he has married a virgin: but if on the contrary, he finds them not, he has no reaſon to ſuſpect her of unchaſtity, as if ſhe were not a virgin, ſince the hymen, or clauſtrum virginale may be broken ſo many other ways, and yet the woman be both virtuous and chaſte.

And thus much I thought myſelf bound to ſay in the behalf of the female ſex, who are often accuſed and ſuſpected of diſhoneſty, when there is no occaſion for it.

CHAP. II.

Of the Organs of Generation in Women, with a Deſcription of the Fabric of a Woman

IN deſcribing the organs of generation in women, I ſhall uſe all poſſible plainneſs and perſpicuity, and ſhall not be afraid to ſpeak ſo as

I may be underſtood by the meaneſt capacity, ſince I deſign nothing but the inſtruction of the ignorant, for their own ſafety, and ſhall ſay with the motto of the royal garter, *Honi ſoit qui maley penſe.*

In the genitals of women there are ſeveral parts which muſt be diſtinctly ſpoken of: That which appears to view at the bottom of the belly is the *fiſſura magna*, or the great clift or fiſſure of an oval form, with its hair about it, alſo the lips, which nature deſigned to keep the internal parts from cold and duſt; theſe are called by the general name of *pudenda*, from ſhamefacedneſs, becauſe a woman is aſhamed when thoſe parts are diſcovered or made bare. The *fiſſura magna* reaches from the lower part of the *os pubis*, near to the *anus*; but it is cloſer in virgins than in thoſe who have borne children, and has two lips, which towards the *pubis* grow more full and thick, and meeting upon the middle of the *os pubis*, make that riſing hill called *mons Veneris*, or the mount of Venus.

The next thing is the *nymphæ*, or wings which appear when the lips are ſevered, and are framed of ſpungy or ſoft fleſh, of a red colour, two in number, joined in an accute angle producing there a fleſhy ſubſtance compoſing the *clytoris*, and both in form and colour reſembling the comb of a cock.

The *clytoris* is a ſinew and hard body, full of ſpungy and black matter within; and in form repreſents the yard of a man, and is ſubject to erection and falling as that does. This is that which is the ſeat of veneral pleaſure, and gives women delight in the act of copulation: for without this, a woman neither deſires coition, nor hath pleaſure in it, nor conceives by it. The clytoris ſometimes grows out of the body two inches, but this very ſeldom happens. And ſome think that hermaphrodites, or theſe that have the genitals, are only ſuch women in whom the clytoris hangs out extremely, and ſo reſembles the form of a yard; and I am almoſt inclined to be of their opinion, eſpecially conſidering that the hanging out of the clytoris, is generally occaſioned through extreme luſt; and both reaſon and authority demonſtrate that the higher the clytoris, in women, the more vehement their deſires are carried after coition, and conſequently the more luſtful.

In the fourth place, under the clytoris, and above the neck of the womb, are the fleſhy knobs, or caruncles, placed behind the wings, and are like myrtle berries placed one againſt another, in which place is inſerted the oriſice of the bladder, for the paſſage of the woman's urine: ſo that the urine of the woman comes not through the neck of the womb, neither is the paſſage of the urine common as in men, but particular by itſelf.

Near the oriſice of the womb, as I ſaid before, there are the caruncles, or fleſhy knobs, in number four, in form like myrtle berries; in virgins theſe are round and plump, but in women that have uſed copulation, theſe are looſe and flagging, and often quite undiſtinguiſhed, ſo that the inſide of the neck of the womb appears ſmooth; the uppermoſt of them is large and forked, the others are below this on the ſides, but they all ſerve to keep back the air, or any offenſive thing, from entering the neck of the womb. Theſe caruncles or knobs are joined together by a thin or ſinewy ſkin or membrane, full of ſmall veins; this membrane hath a hole in the midſt for the paſſage of the monthly courſes, about the bigneſs of the top of one's little finger in ſuch as are in years fit for marriage; this is that noted ſkin called Hy-

men, of which I have ſpoken in the former chapter, and which is a certain ſign of virginity wherever it is found, for the firſt act of copulation ſurely breaks it, though it may be broken without the act of copulation, but it is moſt generally broken by it.

Authors have been of diverſopinions concerning this hymen or mark of virginity: ſome affirming it to be one thing and ſome another; but whatever it be, this is an undoubted truth, that it hath certain veins in it which bleed in the breaking, and that blood ſhews, it to be then firſt broke, and conſequently the perſon to be a virgin; and I do believe, that all virgins have it at firſt, it being the mark that God gave to the Hebrews to try their virginity by; and I cannot believe God would give that for a certain ſign of virginity which is not always to be found, and though it may be broke without copulation, yet young maidens ought to be very wary of it, ſince their honour does ſo much depend upon preſerving it. For men are not bound to believe it was broken by accident, though perhaps it might be ſo; to which end they ought to correct and expel all ſharp and corroding humours which ſometimes gnaw it aſunder, and alſo to avoid all violent exerciſes which may overſtrain them, and by all means touching it with their fingers. I have in the former chapter told you, that the caruncles or fleſhy knobs, together with the Hymen, repreſent the form of a half blown roſe, from whence to deflower a virgin had its original.

The next thing to be ſpoken of is the neck of the womb, which is nothing but the diſtance that is between the privy paſſage and the mouth of the womb, into which the yard goes in the act of copulation, which in ſome women, is eight inches in length; its ſubſtance without is fleſhy, but within ſkinny, and exceedingly wrinkled, that it may the better retain the ſeed ejected in the act of copulation, and alſo that it may diliate and ſtretch in the woman's labour, and the paſſage may be the wider for the birth of the child. The length of the neck of the womb is very neceſſary for two reaſons: Firſt, that it may be filled with abundance of ſpirits, and there be dilated, for its better taking hold of the penis or yard, great heat being required in ſuch motion, which becoming more intenſe or exquiſite by the act of fricatian, conſumes a great quantity of moiſture, which there ought to be large veſſels to ſupply; ſecondly, Becauſe the terms or monthly courſes make their way through them; on which account women with child ſometimes continue their purgations; for, although the womb be ſhut, yet the paſſage in the neck of the womb, through which theſe veſſels paſs, is open.

I will only further obſerve, that as ſoon as man penetrates the pudendum, there appears two little pits or holes, theſe contain an humour which being preſſed out in the time of copulation, gives great delight to a woman.

Having thus ſpoken of the organs of generation in women, I will now deſcribe the fabric of the womb.

The womb is joined to its neck in the lower part of the hypogaſtrion, and is placed between the bladder and the ſtrait gut. Its parts are two, the mouth of the womb, and the bottom of the womb: The mouth or entrance may be both dilated and contracted, much like a purſe, for though, in the act of copulation it be big enough to receive the glans, nut, or top of the man's yard, yet, after conception, it is ſo cloſe ſhut, that it will not admit the point of a bodkin to enter; and after this, at the time of delivery, it dilates itſelf again ſo wide, that it makes room enough for the child

to come forth, which is so wonderful a thing, that all men must acknowledge that the wisdom and goodness of our Creator is eminently to be seen in it.

Its figure is almost perfectly round, and in virgins doth not exceed the bigness of a walnut, yet after conception, it dilates itself gradually, so that it is able both to contain the child and all its appurtenances.

It is thick in substance, insomuch that it exceeds a thumb's breadth, which after conception, is so far from decreasing, that it augments very much; and to strengthen it the more, it is interwoven with *fibres* over athwart, which are both strait and winding, and its proper vessels are veins, arteries, and nerves, among which there are two little veins, which pass from the spermatic vessels to the bottom of the womb, and two larger from the hypogastrics, which touch both the bottom and the neck; the mouth of the veins piercing as far as the inward cavity.

Also the womb hath two arteries on each side the spermatic vessels, and the hypogastries, which still accompany the veins, also divers little nerves that are knit and entwined in the form of a net, and extended to the pudenda, placed chiefly for sense and pleasure, moving by way of sympathy between the head and the womb.

The stones and testicles in women differ in several respects from those of men, and that in relation to their place, form, figure, &c. As to the place, in men they are without the belly, in women within; in men they are oval, and have four skins, to preserve them from injuries; in women they are depressed and flattish, and have but one skin: Their substance also is more soft than those of men, and their temperature is colder. Their office is to contain their ovum or egg, according to our modern authors: But the ancients were of opinion, that they served to concoct the woman's seed, and had the same office in women as the stones have in men, but as this of the woman's having seed is strongly opposed by some and as strongly contended for by others, I will therefore set down the opinions of both, having first made an end of the description of the several parts belonging to the organ of generation in women, which is what I am now upon.

I come now to speak of the spermatic vessels in women, which are divided or distinguished by preparing vessels, and carrying vessels: the preparing vessels are the same in number as in men, which are four, two veins and two arteries, not differing from those in a man, but only in their largeness and manner of insertion; the right vein issuing from the trunk of the vena cava (which is the great vein that receives the blood from the liver, and distributes it by branches to all the body) under the emulgent vein which is one of the chief branches of the hollow veins passing to the reins; but the left springeth from the emulgent, of the same side. Both the arteries issue from the great artery called Aorta, because it is the noblest and mother of all the rest. These preparing vessels are much shorter in women than in men, because their passage is shorter: The stones of a woman, as I have already noted, lying within the belly, but those of men without; but then what they want in length, they have in their various wreathings and contortions, which are more than in men, that the substance they carry may be the better prepared, and therefore, their often turning to and fro, and winding in and out, makes amends for the shortness of the passage. Observe also, that these vessels are not united, as they are in men, before they come to the stones, but are divided in two branches, whereof the greater only goeth to the

ſtones, and the leſſer endeth in the womb, both for the nouriſhment of itſelf and the infant, and that part of the courſes may paſs through theſe veſſels: Theſe ſpermatic veins receive the arteries as they paſs by the ſide of the womb, and ſo their is a mixture between the vital and natural blood, that thereby the work of generation might be better wrought; and thus much for the preparing veſſels.

The carrying veſſels, called *vaſa deferentia* (that is, veſſels which carry the ſeed from the ſtones to the ſeminal veſſels) ariſe from the lower part of the teſticles, and are in colour white, but in ſubſtance ſinewy; they paſs not ſtraight to the womb, but are wreathen, that the ſhortneſs of the way may be compenſated by their various turnings and windings, and, as they come next to the womb, they grow broader.

The ejaculatory veſſels are two paſſages on each ſide of the womb and hardly differ in ſubſtance from the ſpermatic veins, they riſe from the bottom of the womb but reach not either to the ſtones, or any other part, but are ſhut up and impaſſable, adhering to the womb as the collar does to the hind-gut, winding half way about. Although the ſtones are at a diſtance from them, and do not ſo much as touch them, yet they are faſtened to them, by certain membranes, much reſembling the wings of a bat, through which certain veins and arteries that paſs from the end of the teſticles have their paſſages, proceeding from the corners of the horns of the womb to the teſticles, being the proper ligaments by which the teſticles and the womb are knit together; and theſe ligaments in men are called the cremaſters, which are the muſcles that hold up the ſtones, of which I ſhall ſpeak further, when I treat of the organs of generation in man.

CHAP. III.

Of the uſe and Action of the Genitals in the work of Generation.

THE uſe of the external parts, commonly called the pudenda, are deſigned to cover the great orifice, and the uſe of that is to receive the yard in the act of copulation, and to give paſſage to the child at the birth; and alſo a paſſage for the urine. The uſe of the wings and knobs like myrtleberries are for the ſecurity of the internal parts, ſhutting the orifice and neck of the bladder; and by their ſwelling up do cauſe titilation and delight in thoſe parts, and alſo to hinder the involuntary paſſage of the urine. The action of the clytoris in women is like that of the yard in men, which is erection, and its outer end is like the glans, or top of the yard, and has the ſame name, and as the glans in men is the ſeat of the greateſt pleaſure in copulation, ſo is this in women.

The action and uſe of the neck of the womb is equal with that of the yard, and is occaſioned ſeveral ways; for firſt, it is erected and made ſtraight for the paſſage of the yard to the womb in the act of copulation; and then whilſt the paſſage is repleted with ſpirit and vital blood, it becomes more ſtraight for embracing the yard; and the convenience of erection is two fold; firſt if the neck of the womb was not erected, the yard could have no convenient paſſage to the womb; and in the ſecond place, it hinders any damage that may happen, through the violent concuſſion of the yard in the time of copulation.

And as for thoſe veſſels that make their way through the neck of the womb, their office is to repleniſh it with blood and ſpirit, that ſo as the moiſter conſumes by the heat contracted in copulation, it may by thoſe veſſels be renewed; but their chief buſineſs is to convey nouriſhment to the womb.

The womb has many properties attributed to it; the firſt is the retention of the ſeed; as the ancients ſpeak, of the fecundated egg, as others would have it; and this properly is called conception; and, 2dly, to cheriſh and nouriſh it till nature has framed the child, and brought it to perfection, and 3dly, it worketh ſtrenuouſly in ſending forth the birth, when the time of its remaining there is expired, at which time it ſtretcheth forth itſelf in a very wonderful manner.

The uſe of the preparing veſſels is to convey the blood to the teſticles, (part of which is ſpent in the nouriſhment of them, and the production of thoſe little bladders, in all things reſembling eggs) through which the preparing veſſels run, and are obliterated in them; that is done by the arteries; and as for the veins their office is to bring back what blood remains from the aforeſaid uſes. Theſe veſſels are more ſhort in women than in men, by reaſon of their nearneſs to the ſtones; which defect is ſufficiently repaired by the many windings and turnings to which they are ſubject, dividing themſelves in the middle way into two branches, though not of an equal bigneſs, for one is greater than the other.

The ſtones in women are of that uſe that if they are defective, the work of generation ceaſes; for, though (according to the modern opinion) thoſe little bladders which are in their outward ſuperficies, contain nothing of ſeed, yet they contain ſeveral eggs (uncertain as to their number, though generally about twenty) one of which eggs being impregnated by the ſpirituous part of man's ſeed in the act of coition, deſcends into the womb, and in the time nature has appointed, becomes a living child.

Having thus given an account of the uſe and action of the genitals in the act of generation, I ſhall now ſhew you the opinion of both the ancients and moderns touching the woman's contributing ſeed for the formation of the child, as well as the man's; which was the opinion of the ancients, but is denied by our modern authors.

Though it is apparent, ſay the ancients, that the ſeed of a man is the principal efficient, and beginning of action, motion, and generation, yet that the woman affords ſeed, and contributes to the procreation of the child, is evident, from hence, that the women has ſeminal veſſels, which had been given her in vain, had ſhe wanted ſeminal excreſſence; but ſince nature doth nothing in vain, it muſt be granted they were made for the uſe of ſeed and procreation, and fixed in their proper places to operate and contribute virtue and efficacy to the ſeed; and this, ſay they, is farther proved from hence, that if women at the years of maturity uſe not copulation to eject the ſeed, they often fall into ſtrange diſeaſes, as appears by young women and virgins; and alſo it is apparent, that women are never better pleaſed than when they are often ſatisfied this way; which pleaſure and delight, ſay they, is double in women to what it is in men, for, as the delight of men conſiſts chiefly in the ejection of the ſeed, ſo women are delighted both by the ejection of their own, and the reception of the man's.

But againſt all this, our modern authors affirm, that the ancients were very erroneous; for as much as teſticles in women do not afford ſeed, but are two eggs, like thoſe of fowls; neither have they any ſuch office as thoſe of men but are indeed an ovarium, a receptacle for eggs; wherein theſe eggs are nouriſhed by the ſanguinary veſſels diſperſed through them; and from thence, one or more (as they are fœcundated by the man's ſeed) are conveyed into the womb by the oviducts: and the truth of this, ſay they, is ſo plain that if you boil them, they will have the ſame taſte, colour and conſiſtency with the taſte of birds eggs: and if any object, they have no

ſhells, that ſignifies nothing, for the eggs of fowls, while in the ovary, nay, after they have fallen into the uterus, have no ſhell; and though they have one when they are laid, yet it is no more than a fence which nature hath provided for them againſt outward injuries, they being hatched without the body; but thoſe of women being hatched within the body; have no need of any other fence than the womb to ſecure them. And they further ſay, there are in the generation of the fœtus, two principles, active and paſſive; the active is the man's ſeed elaborated in the teſticles out of the arterial blood and animal ſpirits; the paſſive principle is the ovum or egg impregnated by the man's ſeed; for to ſay a woman has true ſeed, is, ſay they, erroneous. But the manner of conception is this; The moſt ſpirituous part of man's ſeed, in the act of copulation, reaches up to the ovarium or teſticles of the woman (which contain divers eggs, ſometimes more, ſometimes fewer) impregnates one of them, which being conveyed by the oviducts to the bottom of the womb, preſently begins to ſwell bigger and bigger, and drinks in the moiſture that is plentifully ſent thither after the ſame manner that ſeeds in the ground ſuck the fertile moiſture thereof to make them ſprout.

But notwithſtanding all this Culpepper, in his directory for Midwives, poſitively affirms, that the teſticles or ſtones of a woman are for generation of ſeed, and for to deny this, is both againſt reaſon and experience. I will not undertake to determine the controverſy, but leave the reader to judge for himſelf, and proceed (having according to the cuſtom of Britain, given women the preference) to deſcribe the organs of generation in man.

CHAP. IV.

Of the Inſtruments or Organs of Generation in Man.

THE penis or yard of the man (being the principal inſtrument of generation) is called ſo, from its hanging without the belly; and it conſiſts of ſkin, tendons, veins, arteries, ſinews and great ligaments, and is long and round: it is ordained by nature both for the paſſage of the urine, and the conveying of the ſeed into the matrix. It hath ſome parts common with it to the reſt of the body, as the ſkin and fleſhy membrane; and ſome parts it has peculiar to itſelf, as the two nervous bodies; the ſeptum, the urethra, or glans, the four muſcles, and veſſels.

The ſkin which the latins call *cutis*, is full of pores, through which the ſweat and fuliginous or ſooty black vapours of the third concoction (which concocts the blood into fleſh) paſs out: The pores are very many and thick, but hardly viſible to the eye, and when the yard ſtands not, it is flaggy, but when it ſtands it is ſtiff: This ſkin is very ſenſible, becauſe the nerves concur to make up its being.

The carnis membrane or fleſhy ſkin, is ſo called, becauſe it lieth between the fleſh, and paſſeth in the other parts of the body, underneath the fat, and ſticks cloſe to the muſcles, not that there is any fat in the yard, only a few ſuperficial veins and arteries paſs between the former ſkin and this, which, when the yard ſtands, are viſible to the eye. Theſe are the parts common both to the yard and the reſt of the body. Now, I will ſpeak of the parts peculiar to itſelf, and firſt, of the two nervous bodies.

The two nervous bodies are ſurrounded with a thick, white nervous membrane but are ſpungy within and full of black blood; the ſpungy ſubſtance of the inward part of it ſeems to be woven together like a net, and conſiſts of innumerable veins and arteries; the black blood contained therein is full of ſpirits, and the deſire of copulation adds heat to them, which

cauſeth the yard to ſtand; and the hollow ſpungy intermixture, or weaving, was ordained on purpoſe to hold the heat or venereal ſpirits, that the yard may not fail before it has done its work; theſe two ſide ligaments of the yard, where they are thick and round, ſpring from the lower part of the ſhare bone, and, at their beginning are ſeparated the one from the other, and reſemble a pair of horns, or the letter Y, where the urethra, that is the common channel of urine and ſeed, paſſeth between them.

The ſeptum is in ſubſtance white, nervous and ſinewy, and its office is to uphold the two ſide ligaments and the urethra.

The urethra is ſinewy, thick, ſoft, and looſe, like to that of the ſide ligaments, before mentioned. It begins at the neck of the bladder, and ſo paſſeth to the glans; in the beginning of it are three holes; one large in the midſt, which receives the urine into it, the other two are ſmaller, which are ſent by each ſeminal veſſel into it, by which it receives ſeed.

The muſcles of the yard are four, two on each ſide A muſcle is an inſtrument of voluntary motion, without which no part of the body can move itſelf; it conſiſts of fibrous fleſh to make up its body of nerves for its ſenſe, of veins for its nouriſhment, of arteries for its vital heat, of a membrane or ſkin, to knit together, and ſo diſtinguiſh one muſcle from another; one of each ſide is ſhorter and thicker than the other, and their uſe is to erect the yard and make it ſtand, and are called erectors; the others are longer and ſmaller, and their office is to dilate and open the lower part of the urethra, or channel both for making water and voiding the ſeed: and theſe are called accelerators.

The glans, in the extreme part of the yard, is ſoft, and of an exquiſite feeling, by reaſon of the thinneſs of the ſkin, wherewith it is covered. It is covered with the preputium, or foreſkin, which the Jews were commanded to cut off the eight day. The ſkin in ſome men covers the top of the yard quite cloſe, but in others not; which moving up and down in the act of copulation, brings pleaſure both the man and woman. The ligament by which the preputium is tied to the glans is called frœnum or the bridle.

The veſſels of the yard are veins, nerves, and arteries. Some veins and arteries paſs by the ſkin, and are viſible to the eye; others paſs by the inward part of the yard, the arteries being diſperſed through the body of the yard exceeding the diſperſion of the veins, for the right artery is diſperſed to the left ſide; it hath alſo two nerves, the leſſer of which is beſtowed on the ſkin, the greater upon the muſcles and body of the yard.

Having thus deſcribed the yard, I ſhall now ſpeak of the ſtones or teſticles, ſo called becauſe they teſtify that he is a man. Their number every body knows, is two; their ſubſtance is white, ſoft, and ſpungy; their form is oval, but in ſome they are bigger than others; each ſtone hath a muſcle, becauſe they pull up the ſtones in the act of copulation, that ſo the veſſels being ſlackened may the better void the ſeed.

The uſe of the ſtones is to convert blood and ſpirit into the ſeed for the procreation of man, and to add ſtrength, heat and courage to man; as appears from eunuchs, who have loſt their ſtones, who are neither ſo hot, ſtrong nor valiant as other men.

To the upper part of the teſticles are fixed the epidimes, from whence ariſes *vaſa deferentia*, or *ejaculatoria*, which, when they come to the neck of the bladder, depoſit the ſeed in *viſculas ſeminales* which are two, each like a bunch of grapes, which admit the ſeed into the urethra in the act of copulation. As for the preparing veſſels, which prepare the blood and vital ſpirits, and carry them to the teſticles, where they are elaborated into ſeed, I have

ſpoken of them in the chapter of the genitals of women; and ſince they differ ſo little from thoſe of men, I ſhall not need to repeat what I have ſaid before.

CHAP. V.

Of Conception: and how a Woman may know whether ſhe hath conceived or not, and whether a male or female.

THE natural inſtinct implanted in men and woman to propagate their own ſpecies, puts them upon making uſe of thoſe ways nature has ordained for that end, which after they have uſed, the women many times, through ignorance of her having conceived, or want of that due care ſhe ought to take is little better than a murderer of her own child, though ſhe intends it not; for after conception, finding herſelf not well, and not knowing what the matter is, ſhe runs to a doctor, and inquires of him, and he knowing nothing but what ſhe tells him, gives her a ſtrong cathartical potion, which deſtroys the conception. And ſome there are, that out of a fooliſh baſhful coyneſs, though they know they have conceived, yet will not confeſs it, that ſo they might be inſtructed to order themſelves accordingly: Thoſe that are ſo coy may in time learn to be wiſer; and for the ſake of thoſe that are ignorant, I ſhall ſet down the ſigns of conception, that women may thereby know whether they have conceived or not.

Signs of Conception.

If under the eye the vein be ſwelled, that is under the lower eyelid, the veins in the eyes appearing clearly, and the eye ſomething diſcoloured; if ſhe has not her terms upon her, nor watched the night before, you may certainly conclude her to be with child. This appears moſt plainly juſt upon her conception, and the firſt two months I never knew this ſign to fail.

Keep the urine of the woman cloſe in a glaſs three days, and then ſtrain it through a fine linen cloth: if you find ſmall living creatures in it, ſhe hath moſt aſſuredly conceived; for, the urine, which was before part of her own ſubſtance, will be generative as well as its miſtreſs.

A coldneſs and chillneſs of the outward parts after copulation, the heat being retired to make conception. The tops of the nipples look redder than formerly. The veins of the breaſt are more clearly ſeen than they were wont to be. The body is weakened, and the face diſcoloured. The belly waxeth very fat, becauſe the womb cloſeth itſelf together, to nouriſh and cheriſh the ſeed. If cold water be drunk, a coldneſs is felt in the breaſts. Loſs of appetite to victuals, four belchings, and exceeding weakneſs of ſtomach. The breaſts begin to ſwell and wax hard, not without pain and ſoreneſs. Wringing or griping pains, like the cramp, happen in the belly about the navel. Divers appetites and longings are engendered. The veins of the eyes are clearly ſeen, and the eyes ſeem ſomething diſcouloured, as a looking-glaſs will ſhew you. This is an infallible ſign. The excrements of the guts are voided painfully, becauſe the womb ſwelling thruſteth the right gut together. Take a green nettle, and put it into the urine of the woman: cover it cloſe, and let it remain a whole night: if the woman be with child, it will be full of red ſpots on the morrow; if ſhe be not, it will be blackiſh. There are ſeveral other rules of this nature, but theſe are the beſt, and ſome of them ſeldom fail. Now, becauſe many are mighty deſirous to know whether they be with child of a male or female, I will, in the next place lay down ſome rules whereby, they may make a judgment in that caſe.

Signs of a Male Child.

A woman breeds a boy with leſs pain than a girl, and does not carry her burden ſo heavily, but is more nimble in ſtirring. The child is firſt felt by her on the right ſide, for the ancients are of opinion, that male children lie on the right ſide of the womb. The woman when ſhe riſeth up from a chair, doth readier ſtay herſelf upon her right hand than on her left. The belly lies rounder and higher than when it is a female. The right breaſt is more plump, and harder than the left, and the right nipple. The colour of a woman is more clear, and not ſo ſwarthy as when ſhe conceives a girl. The contrary to theſe are ſigns of the conception of a female, and therefore it is needleſs to ſet them down. But I will add the following; they have been the reſult of my own experience, and which I never knew fail. If the circle under the woman's eyes, which is of a wan blue colour, be more apparent under the right eye, and the veins moſt apparent in her right eye, and then moſt diſſolved, ſhe is with child of a boy: if the mark be moſt apparent in her left eye, ſhe is with child of a girl. Again, let her milk a drop of her milk in a baſon of fair water: If it ſinks to the bottom, as it drops in, round in a drop, it is a girl ſhe is with child of, but if it be a boy, it will ſpread and ſwim at the top. This I have often tried, and it never failed. But before I conclude this chapter, I ſhall lay down ſome rules that women ought to obſerve in order to conception: and likewiſe, what they ſhould do after conception, to prevent miſcarriage.

What Women ought to obſerve in order to Conception.

Women that are deſirous to have children; in order thereunto, muſt give themſelves moderate exerciſe; for idleneſs and want of exerciſe are very great enemies to generation work; and thoſe that obſerve it, ſhall find that your city dames, who live high, and do nothing, ſeldom have children, or if they have, they ſeldom live; whereas, the poor women who accuſtom themſelves to labour, have many children, and thoſe luſty. Nor need we wonder at it, if we conſider the benefit that comes by moderate exerciſe and labour, for it opens the pores, quickens the ſpirits, ſtirs up the natural heat ſtrengthens the body, ſenſes, and ſpirits, and comforts the limbs, and helps nature in her exerciſes, of which the procreation of children is none of the leaſt.

Next to moderate exerciſe, ſhe muſt avoid all manner of diſcontent, and the occaſion of it: for diſcontent is a great enemy to conception, but contentment and quietneſs of mind are as great friends to it; for content dilates the heart and arteries, whereby the vital blood or ſpirits is ſufficiently diſtributed throughout the body; and thence ariſe ſuch affections as pleaſe, recreate, and refreſh the nature of man, as, hope, joy, love, gladneſs and mirth. Nor does it only comfort and ſtrengthen the body, but alſo the operations and imaginations of the mind; for all agree, that the imagination of the mother works forcibly upon the conception of the child; and therefore women ought to take great care that their imagination be pure and clear, that their children may be well formed.

Another thing that women ought to do in order to conception is, to keep the womb in good order: and to that end, ſee that the menſtrues come down as they ought to do: if they are diſcoloured, then they are out of order but if the blood come down pure, then the woman will be very prone to conceive with child, eſpecially if they uſe copulation a day or two after their monthly terms are ſtayed.

Another thing a woman ought to obſerve that would conceive, is, that ſhe uſe not the act of copulation too often, for ſatiety gluts the womb, and makes it unfit to do its office. There are two things demonſtrate this: one is, that the common whores (who often uſe copulation) have ſeldom any children, the other is, that thoſe women whoſe huſbands have been long abſent, after they come again, conceive very quickly.

And then let the time of copulation be convenient, that there may be no fear of ſurprize, for fear hinders conception.

And let the time of copulation be natural, and not ſtirred up by provocatives: and obſerve alſo that the greater the woman's deſire of copulation is, the more ſubject ſhe is to conceive.

A loadſtone carried about a woman cauſeth not only conception, but concord between man and wife.

Things neceſſary for Women to obſerve after Conception.

Women are very ſubject to miſcarriages in the two firſt months after conception, becauſe then the ligaments are weak and ſoon broken. To prevent which, let the woman every morning drink a good draught of ſage ale, and it will do her abundance of good.

But if ſigns of abortion or miſcarriage appear, let her lay a toaſt dipped in tent, in caſe muſkadel cannot be gotton to her navel, for this is very good: or let her take a little garden tanſy, and having bruiſed it, ſprinkle it with muſkadel, and apply it to the navel, and ſhe will find it much better. Alſo tanſy infuſed, in ale, like ſage ale, and a ſtraught drunk every morning is moſt excellent for ſuch women as are ſubject to miſcarriage, alſo take juice of tanſy, clarify it, and boil it up into a ſyrup, with twice its weight in ſugar, and let a woman take a ſpoonful or two of it, in ſuch caſes it will be an excellent preſervative againſt miſcarriages.

Alſo let the air be temperate, ſleep moderate, avoiding watching, and immoderate exerciſe, with diſturbing paſſions, loud clamours and filthy ſmells: and let her abſtain from all things which may provoke either the urine or the courſes, and alſo from all ſharp and windy meats, and let a moderate diet be obſerved. If the excrements of the guts be retained, lenify the belly with clyſters made of the decoction of mallows, violets, with ſugar and common oil; or make broth of burrage, bugloſs, beets, mallows, and take therein a little manna: but, on the contrary, if ſhe be troubled with a looſneſs of the belly, let it not be ſtopped without the judgment of a phyſician, for all uterine fluxes have a malignant quality in them, which muſt be evacuated and removed before the flux is ſtayed.

CHAP. VI.

Of Barrenneſs with the remedies againſt it, and the ſigns of inſufficiency both in Men and Women.

HAVING, in the foregoing chapter, treated of conception, with the ſigns, and given directions to the women both before and after conception, I will in this chapter treat of the oppoſite to conception, to wit, barrenneſs.

If it is a bleſſing to have children, then certainly barrenneſs muſt be a great curſe: And indeed in holy writ it is ſo accounted, and therefore, ſome are threatened that they ſhall die childleſs; and the wife of Jacob, even his beloved Rachel, cried out to him, "Give me children, or elſe I die." Indeed it was a paſſionate expreſſion, and fell out

according to her words. for ſhe had children and died in childbed. But to the ſubject in hand, which is barrenneſs.

Barrenneſs is threefold, to wit, either natural, accidental or againſt nature.

Natural barrenneſs is when a woman is barren, though the inſtruments of generation are perfect both in herſelf and huſband, and no prepoſterous and diabolical courſe uſed to cauſe it, and neither age nor diſeaſes, nor any natural defect hindering, and yet the woman remains naturally barren, and conceives not.

Now this may proceed from a natural cauſe; for if the man and woman be of one complexion, they ſeldom have children, and the reaſon is clear, for, the univerſal courſe of nature being formed by the Almighty of a compoſition of contraries, cannot be increaſed by a compoſition of likes, and therefore, if the conſtitution of the woman be hot and dry, as well as that of the man, there can be no conception, and if, on the contrary, the man ſhould be of a cold and moiſt conſtitution, as well as the woman, the effect would be the ſame, and this barrenneſs is purely natural. The only way to help it is, for the people before they marry to obſerve each others conſtitutions and complexions if they deſign to have children; if their complexion or conſtitutions be like, they are not fit to come together; for diſcordant natures make the only harmony in the works of generation.

Another natural cauſe of barrenneſs, is want of love between man and wife, love is that vital principle that ought to animate each organ in the act of generation, or elſe it will be ſpiritleſs and dull, for, if their hearts be not united in love, how ſhould their ſeed unit to cauſe conception? And this is ſufficiently evidenced, in that there never follows a conception upon a rape, therefore if men and women deſign to have children, let them take care to live ſo, that their hearts as well as their bodies may be united, or elſe they miſs of their expectations.

A third cauſe of natural barrenneſs is the letting of virgins blood in the arm before their natural courſes are come down, which is uſually in the fourteenth and ſixteenth years of their age, ſometimes, perhaps, before the thirteenth, but never before the twelfth. And becauſe uſually they are out of order and indiſpoſed before their purgations come down, their parents run to a doctor to know what's the matter, and he ſtraight preſcribes opening a vein in the arm, ſeeing it was fulneſs of blood which was the cauſe offending, and this makes her well at preſent, and when the young virgin happens to be in the ſame diſorder again, the mother ſtraight runs to the ſurgeon, uſes the ſame remedy, and by theſe means the blood is diverted from its proper channel, ſo that it comes not down to the womb, as in other women, whereby the womb dries up, and the woman is forever barren. The way to prevent this, is to let no virgin blood in the arm before her courſes come well down, but, if there be occaſion, in the foot, for that will bring the blood downward, and by that means provoke the menſtrues to come down.

Another cauſe of natural barrenneſs is, the debility of perſons in copulation; if perſons perform not that act with all the heat and ardour that nature requires, they may as well let it alone, and expect to have children without it; for frigidity and coldneſs never produce conception. Of the cure of this we will ſpeak, after I have ſpoken of,

Accidental barrenneſs, which is what is occaſioned by ſome morbific matter or infirmity upon the body, either of the man or woman, which

being removed, they become fruitful. And hence (as I have before noticed) the first and great law of the creation was to increase and multiply, and barrenness is the direct opposition of that law, and frustrates the end of our creation; and it is so great an affliction to many to be without children, as to cause man and wife to have hard thoughts of one another, each party thinking the cause is not in them; I shall here, for the satisfaction of all well meaning people, set down the signs and causes of insufficiency both in men and women, premising this first that when people have no children, they must not presently blame either party, for neither may be in the fault, but perhaps God sees it not good (for reasons best known to himself) to give them any; of which we have divers instances both in sacred and profane history; and though the Almighty, in the production of nature, works by natural means, yet where he withholds his blessing, natural means are ineffectual, for, it is his blessing, that it is the power and energy by which nature brings her productions forth.

Signs and causes of insufficiency in Men.

One cause may be some viciousness in the yard; as if the same be crooked, or any ligaments thereof distorted or broken, whereby the ways and passages through which the seed should flow come to be stopped or vitiated.

Another cause may be too much weakness of the yard and tenderness thereof, so that it is not strongly enough erected to inject the seed into the womb, for, the strength and stiffness of the yard very much conduce to conception, by reason of the forcible injection of the seed.

Also, if the stones have received any hurt, so that they cannot exercise their proper gift in producing seed; or, if they be oppressed with any inflammation or tumour, wound or ulcer, drawn up within the belly, and not appearing outwardly, these are signs of insufficiency and causes of barrenness

Also, a man may be barren, by reason of the defect of his seed: as, First. If he cast forth no seed at all, or less in substance than is needful; or, Secondly, if the seed be vicious, or unfit for generation; as, on the one side, it happens in bodies that are gross and fat, the matter of it being defective; and on the other side, too much leanness, or continual wasting or consumption of the body destroys the seed, nature turning all the matter and substance thereof into nutriment of the body.

Too frequent copulation is also one great cause of barrenness in men, for it attracteth the seminal moisture from the stones before it is sufficiently prepared and concocted, so if any one by daily copulation do exhaust and draw out all the moisture of his seed, then do the stones draw the moist humours from the superior veins unto themselves, and so having but little blood in them, they are forced of necessity to cast it out raw and unconcocted; and thus the stones, violently deprived of the moisture of their veins, attract the same from the other superior veins, and the superior veins, from all the other parts of the body for their proper nourishment; thereby depriving the body of its vital spirits; and therefore no wonder that those who use immoderate copulation are very weak in their bodies, seeing their whole body is thereby deprived of its best and purest blood, and also of the vital spirits, insomuch, that many who have been too much addicted to that pleasure have killed themselves in the act; and therefore, it is no wonder if such unconnected and undigested seed be unfit for generation.

Gluttony and drunkenness, and other excesses, do also much hinder

men from fruitfulneſs, and make them unfit for generation. But amongſt other cauſes of barrenneſs in men, this alſo is one that makes them barren, and almoſt of the nature of eunuchs, and that is the inciſion, or cutting of the veins behind the ears, which in caſe of diſtempers, is oftentimes done, for according to the opinion of moſt phyſicians and anatomoſts, the ſeed flows from the brain by thoſe veins behind the ears more than from any other part of the body: from whence it is very probable, the tranſmiſſion of the ſeed is hindered by cutting of the veins behind the ears, ſo that it cannot deſcend at all to the teſticles, or comes thither very crude and raw. And thus much for ſigns of barrenneſs in men.

Signs and Cauſes of Inſufficiency, or Barrenneſs in Women.

Although there are many cauſes of barrenneſs in women, yet the chief and principal are internal reſpecting either the privy parts of the womb, the ſeed, or the menſtruous blood.

Therefore Hippocrates ſaith (ſpeaking of either the eaſy or difficult conception in women) the firſt conſideration ought to be had of their ſpecies, for little women are more apt to conceive than great, ſlender than groſs, white and fair than ruddy and high coloured, black than pale and wan; thoſe which have their veins conſpicuous are more apt than others; but to be very fleſhy is evil; to have great ſwelling breaſts is good.

The next thing to be conſidered is, the monthly purgations, whether they have them every month; if they flow plentifully, are of a good colour, whether they have them equally every month; for ſo they ought to be.

Then the womb or place of conception is to be conſidered: it ought to be clean and ſound, dry and ſoft, not retracted, nor drawn up, nor prone, nor deſcending downward, the mouth thereof turned away, nor too cloſe ſhut. But to be more particular.

The firſt parts to be ſpoken of are the Pudenda, or privities, and the womb; when theſe are ſhut and encloſed either by nature or againſt nature, ſuch women are called *imperforate;* for in ſome women the mouth of the womb continues compreſſed, or cloſed up, from the time of their birth, until the coming down of their courſes; and then on a ſudden, when their terms preſs forward to purgation, they are moleſted with great and unuſual pains; ſome of theſe break of their own accord, others are diſſected and opened by a phyſician; others never break at all and then it brings death.

All theſe Aetius particularly handles, ſhewing that the womb is ſhut three manner of ways, which hinders conception; firſt, when the lips of the Pudenda grow or cleave together; ſecond, when there are certain membranes growing in the middle part of the matrix within;—third, when (though the lips and boſom of the Pudenda may appear fair and open) the mouth of the womb may be quite ſhut up; all which are occaſions of barrenneſs, in that they hinder both the uſe of man, the monthly courſes and conception.

But among all the cauſes of barrenneſs in women, the greateſt is in the womb, which is the field of generation: and, if the field be corrupted, it is in vain to expect any fruit let it be never ſo well ſown; for it may be unfit for generation, by reaſon of the many diſtempers to which it is ſubject, as, for inſtance, overmuch heat and over much cold, for women whoſe wombs are too thick and cold cannot conceive, becauſe coldneſs extinguiſheth the natural heat of the human ſeed.

Immoderate moiſture of the womb alſo deſtroys the ſeed of man, and

makes it ineffectual, as corn sown in fens and marshes; and so doth overmuch dryness of the womb, so that the seed perisheth for want of nutriment.

Immoderate heat of the womb is also a cause of barrenness; for it scorcheth up the seed, as corn sown in the draught of summer: for immoderate heat hurts all the parts of the body, and no conception can live to be nourished in that woman.

Also when unnatural humours are engendered; as too much phlegm, tympanies, wind, water, worms, or any such evil humours abounding, contrary to nature; it causes barrenness, as does also the terms not coming down in due order, as I have already said.

A woman may also have other accidental causes of barrenness, as sudden fright, anger, fear, grief, and perturbation of the mind; too violent exercises, as leaping, dancing, running after copulation, and the like. But I will now add some signs whereby we may know those things.

If the cause of barrenness be in the man through overmuch heat in his seed, the woman may easily feel that in receiving it.

If the nature of the womb be too hot, and so unfit for conception, it will appear by having her terms very little, and their colour inclining to yellowness; she is also very hasty, choleric, and crafty, her pulse beats very swift, and she is very desirous of copulation.

If you would know whether the fault lies in the man or woman, sprinkle the man's urine upon one lettuce leaf, and the woman's upon another, and that which dries away first is unfruitful. Also, take five wheat corns, and seven beans, put them into an earthen pot, and let the party make water therein; let this stand seven days, and if in that time they begin to sprout, then the party is fruitful, but if they sprout not, then the party is barren, whether it be man or woman. This is a certain sign.

There are some that make this experiment of a woman's fruitfulness: Take myrrh, red storax, and some such odoriferous things, and make a perfume of it, which let the woman receive into the neck of the womb through a funnel; if she feel the smoke ascend her body to her nose, then she is fruitful, otherwise barren.

Some also take garlick and beat it, let the woman lie on her back upon it, and if she feels the scent thereof ascend to her nose, it is a sign of fruitfulness.

Culpepper and others, give a great deal of credit to the following experiment.

Take a handful of barley, and steep half of it in the urine of the man, and the other half in the urine of the woman, for the space of twenty-four hours, and then take it out, and set the woman's by itself, and the man's by itself; set it in a flower pot, or some other thing where you may keep it dry; then water the man's every morning with his own urine, and the woman's with hers, and that which grows first is the most fruitful, and if one grow not at all that party is naturally barren.

But now having spoke enough of the disease, it is high time to assign the cure.

If barrenness proceedeth from stoppage of the menses, let the woman sweat, for that opens the parts, and the best way to sweat is in a hot-house. Then let the womb be strengthened by drinking a draught of white wine, wherein a handful of stinking artack, first bruised, has been boiled, for by a certain magnetic virtue, it strengthens the womb, and by a sympathetic quality, removes any disease thereof. To which add

alſo a handful of vervain, which is very good to ſtrengthen both the womb and the head, which are commonly afflicted together by a ſympathy.

Having uſed this two or three days, if they come not down, take of calamint, penny royal, thyme betony, dittany, burnet, feverfew, mugwort, ſage, piony-roots, juniper berries, half a handful of theſe, or ſo many of them as can be gotton; let all theſe be boiled in beer, and drank for her ordinary drink.

Take one part of gentian, two parts of centaury, diſtil them with ale in an alembick, after you have bruiſed the gentian-roots, and infuſed them well. This water is an admirable remedy to provoke the terms, But if you have not this water in readineſs, take a dram of centaury, and half a dram of gentian-roots, beat them to powder, and take it in the morning in white wine, or elſe take a handful of centaury, and half a handful of gentian-roots bruiſed; boil it in poſſet drink, and drink a draught of it at night going to bed, Seed of wild-navew beaten to powder, and a dram of it taken in the morning in white wine, is alſo very good. But if this doth not do, you muſt let blood in the legs. And be ſure you adminiſter your medicine a little before the full of the moon, or between the new and full moon, but by no means in the wane of the moon; if you do you will find them inaffectual.

If barrenneſs proceed from the overflowing of the menſtrues, then ſtrengthen the womb, as you were taught before, and afterwards anoint the reins of the back with oil of roſes, oil of myrtles, or oil of quinces, every night, and then wrap a piece of white baize about your reins, the cotton-ſide next your ſkin, and keep the ſame always to it. But above all, I commend this medicine to you; take comfrey leaves or roots, and clowns, wound-wort, of each one handful, bruiſe them well, and boil them in ale, and drink a good draught of it every now and then: or take caſſia, cinnamon, lignea, opium, of each two drams: myrrh, white pepper, galbanum, of each one dram; diſſolve the gum and opium in whitewine, beat the reſt into powder; then make them into pills, by mixingthem together exactly, and let the patient take two pills every night going to bed but let not both the pills exceed fifteen grains.

If Barrenneſs proceed from a flux of the womb, the cure muſt be according to the cauſe producing it, or which the flux proceeds from which may be known by its ſigns; for a flux of the womb being a continual diſtillation from it for a long time together, the colour or what is voided ſhews what humour it is that offends; in ſome it is red, and that proceeds from blood putrified; and in ſome it is yellow, and that denotes choler; in others white and pale, and that denotes phlegm. If pure blood comes out, as if a vein was opened, ſome corroſion or knawing of the womb is to be feared. All of them are known by theſe ſigns.

The place of conception is continually moiſt with the humours, the place is coloured, the party loaths meats, and breathes with difficulty; the eyes are much ſwolen, which is ſometimes with pain. If the offending humour be pure blood, then you muſt let blood in the arm, and the cephalic vein is fitteſt to draw back the blood, and then let the juice of plantain and comfrey be injected into the womb. If phlegm be the cauſe, let cinnamon be the ſpice uſed in all her meats and drinks; and let her take a little venice treacle or mithridate every morning; let her boil burnet, mugwort, featherfew and vervain in all broths. Alſo half a dram of myrrh taken every morning is an excellent remedy againſt this malady. If cholar be the cauſe, let her take burrage,

bugloſs, red roſes, endive, and ſuccory roots, lettuce and white poppy-ſeed, of each a handful; boil theſe in white wine till one half is waſted; let her drink half a pint every morning; to which half a pint add ſyrup of peach flowers and ſyrup of chicory, of each one ounce with a little rhubarb; and this will gently purge her. If it proceed from putrified blood, let her blood in the foot, and then ſtrengthen the womb, as I have directed, in ſtopping the menſtrues.

If barrenneſs be occaſioned by the falling out of the womb, as ſometimes happens, let her apply ſweet ſcents to her noſe, ſuch as civit, galbanum, ſtyrax calamitis, wood of aloes, and ſuch other things as are of that nature, and let her lay ſtinking things to the womb, ſuch as aſſafœtida, oil of amber, or the ſmoke of her own hair burnt; for this is certain that the womb flies from all ſtinking, and applies to all ſweet things. But the moſt infallible cure in this caſe is this; take a common burdock leaf (which you may keep dry if you pleaſe all the year) apply this to her head, and it will draw the womb downward. Burſeed beaten into powder, has alſo the like virtue; for by a magnetic power it draws the womb which way you pleaſe, according as it is applied.

If barrenneſs proceed from a hot cauſe, let the party take whey and clarify it, then boil plantain leaves and roots in it, and drink it for her ordinary drink. Let her alſo inject the juice of plantain into the womb with a ſyringe: If it be in the winter, when you cannot get the juice, make a ſtrong decoction of the roots, and leaves in the water, and inject that up with a ſyringe; but let it be blood warm, and you will find this medicine of great efficacy. And further to take away barrenneſs proceeding from hot cauſes, take often conſerve of roſes, cold lozenges made of tragacanth, the confection of tricantellia, and uſe to ſmell camphire, roſe water, and ſaunders. It is alſo good to bleed the baſilica, or liver vein, and then take this purge; take electuarum de epithimo de facco roſarum, of each two drams and a half, clarified whey four ounces; mix them well together, and take it in the morning faſting; ſleep after it about an hour and a half, and faſt four hours after it; and about an hour before you eat any thing drink a good draught of whey. Alſo take lily-water four ounces; mardrogar-water one ounce, ſaffron half a ſcruple; beat the ſaffron to powder, and mix it with the waters, and drink them warm in the morning; uſe this eight days together.

Here followeth ſome excellent Remedies againſt Barrenneſs and to cauſe Fruitfulneſs.

TAKE broom flowers, ſmallage, parſley ſeed, cummin, mugwort, featherfew, of each half a ſcruple; aloes half an ounce; India ſalt, ſaffron, of each half a dram, beat and mix well together, and put it into five ounces of featherfew water warm, ſtop it cloſe and let it ſtand and dry in a warm place: and thus do two or three times one after another; then make each dram into ſix pills, and take one of them every other night before ſupper.

A confection very good againſt barrenneſs. Take piſtachia, pingles, eringoes, of each half an ounce; ſaffron one dram, lignum aloes, gallingale, mace, caryophilla, balm flowers, red and white behen, of each four ſcruples; ſhaven ivory, caſſia bar of each two ſcruples; ſyrup of confected ginger twelve ounces; white ſugar ſix ounces; decoct all theſe well together, then put to it of muſk and amber, of each half a ſcruple: take thereof the quantity of a nutmeg three times a day; in the morning and an hour before noon, and an hour after ſupper.

But if the cauſe of barrenneſs either in man or woman, be through the ſcarcity or diminution of the natural ſeed, then ſuch things are to be taken as do increaſe the ſeed, and incite or ſtir up venery and farther conception; which I ſhall here ſet down, and ſo conclude this chapter of barrenneſs.

For this, yellow rape ſeed baked in bread is very good; alſo young fat fleſh, not too much ſalted; alſo ſaffron, the tails of ſtincus, and long pepper prepared in wine: let ſuch perſons eſchew alſo ſour, ſharp, doughy and ſlimy meats, long ſleep after meat, ſurfeiting and drunkenneſs, as much as they can; keep themſelves from ſorrow, grief, vexation and care.

Theſe things following, increaſe natural ſeed and ſtir up to venery, and recover the ſeed again when loſt, viz. eggs, milk, rice boiled in milk; ſparrow's brains, fleſh, bones and all; the ſtones and pizzles of bulls, bucks, rams, and boars; alſo cock ſtones, lamb ſtones, patridges, quails and pheaſant's eggs; and this is an undeniable abhoriſm, that whatſoever any creature is addicted unto, they move or incite the man or woman that eats them to the like: and therefore patridges, quails, ſparrows, &c. being extremely addicted to venery, they work the ſame effect in thoſe men and women that eat them. Alſo to take notice, that in what part of the body the faculty, which you would ſtrengthen lies, take the ſame part of the body of another creature in whom the faculty is ſtrong for a medicine. As, for inſtance, the procreative faculty lies in the teſticles; therefore cock ſtones, lamb ſtones, &c. are proper to ſtir up venery. I will alſo give you another general rule; creatures that are fruitful, being eaten, make them fruitful that eat them; as crabs, lobſters, prawns, pigeons, &c.

Authors have ſet down ſeveral ways for the prevention of barrenneſs; to carry the herb St. John's Wort about them; which for that cauſe was called by the ancients Fuga Demonum, or the Devil driver. Alſo to carry a loadſtone about them, was accounted a great preſervative: as likewiſe a plaiſter of St John's Wort laid to the reins. And laſtly, the heart of a turtle dove carried about them; but theſe are only for prevention. But you will ſay, how if prevention come too late, and the miſchief be done already, and the man cannot give his due benevolence? muſt the poor man remain helpleſs, and the good woman go without what ſhe is married for? No there is help even in this caſe alſo: and the cure is eaſy, which though the reader may ſcruple to believe, yet it has been tried and found effectual; it is no more than this, let the man only make water through his wife's wedding ring, and the enchantment will be broke: and thus one piece of witchcraft is made to drive out another. But I will here put a period to this chapter.

Of the pleaſure and advantage of Marriages; with the unequal Matches, and the ruinous effect of unlawful Love.

WE have hitherto been treating of the generation of man, which is effected by man and woman in the action of coition or copulation. But this can be no ways lawfully done but by thoſe who are joined together in wedlock, according to the inſtitution of the Creator in paradiſe when he firſt brought man and woman together: Which being ſo it neceſſarily leads to treat of the pleaſure and advantage of a married life.

And ſure there is none that reaſonably queſtion the pleaſure and advantage of a married life that does but reflect upon its author, or the

time and place of its inſtitution. The author and inſtitutor of marriage was no other than the great Lord of the whole univerſe, the Creator of heaven and earth, whoſe wiſdom is infinite, and therefore knew what was beſt for us, and whoſe goodneſs is equal to his wiſdom, and therefore inſtituted marriages, as what was beſt for the man whom he had but juſt created, and whom he looked upon as ſhort of that complete happineſs which he had deſigned him whilſt he was alone and had not the help mate provided for him. The time of its inſtitution is no leſs remarkable; it was whilſt our firſt parents were cloathed with that virgin purity and innocence in which they were created; it was at a time wherein they had a bleſſed and uninterrupted converſe and communion with their great Creator; and were complete in all the perfections both of mind and body, being the lively image of him that created them; it was at a time when they could curiouſly ſervey the ſeveral incomparable beauties and perfections of each other, without ſin, and knew not what it was to luſt; it was at this happy time the Almighty divided Adam from himſelf, and of a crooked rib made him an help mate for him; and by inſtituting marriage, united him unto himſelf again in Wedlock's ſacred bands. And this muſt needs ſpeak very highly in commendation of a married life.

But we have yet conſidered only the time; now let us conſider next what place it was wherein at firſt this marriage knot was tied, and we ſhall find the place was Paradiſe, a place formed by the great Creator for delight and pleaſure: and in our uſual dialect when we ſhould ſhow the higheſt ſatisfaction we take in, and give the greateſt commendation to a place, we can aſcend no higher than to affirm it was like a Paradiſe. There are many curious delicacies and delights to pleaſe the eye and charm the ear in the gardens of princes and noblemen; but paradiſe did certainly outdo them all, the ſacred Scripture giving of its high encomiums. It was pleaſant as the gardens of God. It was in the midſt of Paradiſe, the centre of delight and happineſs, that Adam was unhappy while in a ſingle ſtate; and therefore marriage may properly be ſtiled the Paradiſe of Paradiſe itſelf.

I will ſhew you the love of a good wife to her huſband in an illuſtrious example of a queen of our own nation.

King Edward the firſt making a voyage to Paleſtine, for the recovery of the Holy Land, in which expedition he was very victorious and ſucceſsful, took his queen along with him, who willingly accompanied him in all the dangers he expoſed himſelf to. It ſo happened that after ſeveral victories obtained, which made him both beloved with a feared, he was wounded by a Turk, with an impoiſoned arrow, which all the king's phyſicians, concluded mortal, unleſs ſome human creature would ſuck away the poiſonous blood out of the wound: at the ſame time declaring that it would be the death of thoſe that did it: upon this the thing was propoſed to ſeveral of the courtiers; but they all waved this piece of loyalty; and as well as they pretended to love the king, yet loved their own lives better; and therefore with a compliment declined it, which, when the noble queen perceived, and that the king muſt die for the want of ſuch a kind aſſiſtance, ſhe, with a braveneſs worthy of herſelf, declared ſhe was reſolved herſelf to undertake his cure, and venture her own life to ſave the king her huſband; and ſo accordingly ſucked the poiſonous matter from the wound, and thereby ſaved the king: and, Heaven which did inſpire her with that generous reſolution, preſerved her too, as a reward for her great conjugal affection.

But that which renders marriage such a mormo, and makes it look like such a bugbear to our modern sparks, are those unhappy consequences that too often attend it; for there are few but see what inauspicious torches Hymen lights at every wedding; what unlucky hands link in the wedding ring, nothing but fears and jars, and discontents or jealousies, a curse as cruel or else barrenness, are all the blessings which crown the genial bed. But it is not marriage that is to blame for this, the things are only the effects of forced and unequal matches; when greedy parents, for the thirst of gold, will match a daughter that is scarce seventeen to an old miser that is above threescore, can any think they two can ever agree, whose inclinations are as different as the months of June and January? This makes the woman (who still wants a husband, for the old miser is scarce the shadow of one) either to wish, or may be to contrive his death, to whom her parents thus against her will, have yoked her; or else to satisfy her natural inclinations she throws herself into the arms of unlawful love, both of which are equally destructive, and which might both have been prevented, had her greedy inconsiderate parents provided her such a match as had been suitable and proper. A sad truth of which is an instance follows.

There lived in Warwickshire a gentleman of very good estate; who being grown ancient at the death of his first wife, thought of marrying his son and heir, then at man's estate, to the daughter of a neighbouring gentleman, of an ancient family and a fair estate, who approved of the motion, and agreed to give 5000l. with his daughter upon her marriage with the young gentleman. No sooner had the father a sight of the young lady, but forgetting his son, became a suitor for himself; and to obtain her, offered as much money for her (besides the settling a good jointure on her) as her father had promised to give with her to his son. This liberal offer so wrought on her lady's father, that what with persuasions, and with menaces, he forced his daughter unwillingly to consent, to be married to the old man. But as she was in a manner compelled to this unequal match, so she never lived contentedly with him; for her affections wandering after other men, she gave entertainment to a young gentleman of twenty two years of age, whom she liked much better than her husband, as one more suitable to her young years; that she grew impatient for her husband's death, therefore sought to cut that thread of life she was of opinion nature lengthened out too long; and to that end having corrupted her waiting woman, and a groom belonging to the stable, she resolved by their assistance, and that of her enamorato, to murder him in his bed by strangling him; which resolution (although her lover failed her and came not at the time she appointed him, recoiling at the dismal apprehension of a fact so horrid) she executed only by her servants. For watching till her husband was asleep, she let in those assassins, and then casting a long towel about his neck, she caused the groom to lie upon him, that he might not struggle, whilst she and her maid, by straining the towel, stopped his breath. And now the next thing was how to prevent discovery; and to that end they carried him to another room, where a close stool was placed, on which they set him; and when the maid and groom were both withdrawn and the coast clear, she made such an hideous outcry in the house, wringing her hands, and pulling off her hair, and weeping so extremely, that none suspected her; for she alledged that missing him sometime out of bed, she went to see what was the matter he staid so long, found him dead

sitting on his close stool: which seeming very plausible, prevented all suspicions of his death. And being thus rid of her husband, she set a greater value on her beauty, and quite shook off her former lover (perhaps because he had implicitly refused to be an actor in her husband's tragedy) and coming up to London, made the best market of her beauty that she could. But murder is a crime that seldom goes unpunished to the grave: in two years after, justice overtook her, and brought to light this horrid deed of darkness. The groom (one of the actors of this fatal tragedy, being retained a servant with the son and heir of the old murdered Gentleman, for whom the lady was at first designed) with some other servants attending him to Coventry, his guilty conscience (he being in his cups) forced him upon his knees to beg forgiveness of his master for the murder of his father. And taking him aside, acquainted him with all the circumstances of it.

The gentleman, though struck with horror and amazement at the discovery of so vile a fact, yet gave the groom good words, but ordered his servants to have an eye upon him, that he might not escape when sober; and yet escape he did, for all their vigilance, and being got to the sea side, he attempted three times to put to sea, but was as often forced back by contrary winds; where being pursued and apprehended by his master he was brought back a prisoner to Warwick, as was, soon after, the lady and her gentlewoman also, whowere all justly executed for that horrid murder: The lady was burned on Wolvey-heath, and the two servants suffered death at Warwick: leaving the world a sad example of the dismal consequences of doting love, forced marriages, and unequal matches.

And though in many such like matches, the mischief does not run so high, as to break forth into adultery and murder, but the young lady, from a principle of virtue and the fear of God, curbs her natural inclinations, and preserves her chastity yet even in this very case, her husband, conscious of the abatement of his youthful vigour, and his own weak imbecile performance of the conjugal rites, suspects his virtuous lady and watches, over her with Argus' eyes, making himself and her unhappy by his senseless jealousy; and though he happens to have children by her (which may well be, having so good ground to improve on) yet can scarcely think they are his own. His very sleep is disturbed with the dreams of cuckoldom and horns; nor dares he keep a pack of hounds for fear Actæon's fate should follow him. These are a few of the sad effects of old mens' dotage, and unequal matches.

But let us turn the tables now, and see if it be better on the other side, when a young spark about two and twenty marries a granum of three score and ten, with a face more wrinkled than a piece of tripe. This I am sure, is more unnatural: Here can be no increase, unless of gold, which oftentimes the old hag (for one can call her no better) that marries a young boy to satisfy her letcherous itch, conveys away before her marriage, to her own relations, and leaves the expecting coxcomb nothing but repentance for his portion. Pocket expenses perhaps she will allow him, and for those slender wages he is bound to do the basest druggery. But, if he meets with money, which was the only motive of the match (her gold being the greatest cordial at the wedding feast) he does profusely squander it away, and riots in excess amongst his whores, hoping, ere long, his antiquated wife will take a voyage to another world, and leave him to his liberty; whilst the old grandame, finding her money wasted, and herself despised, is filled with those resentments that jealousy, envy, and neglected love can give,

hoping each day, to see him in his grave, though she has almost both feet in her own: thus, they each day wish for each others death, which if it comes not quickly, they often help to hasten.

But these are still excrescences of marriage, and are the errors of the people marrying, and not the fault of marriage itself. For, let that be what God at first ordained, a nuptial of two hearts, as well as hands, whom equal years and mutual love has first united, before the persons join their hands, and such will tell you, that mortals can enjoy no greater happiness on this side of heaven.

CHAP. VIII.

Directions to both Sexes, how to manage themselves in the Act of Coition, or Venereal Embraces.

HAVING shewed, in the former chapter, the pleasures and advantages of marriage, I will now give some directions to the new married persons, how to manage themselves in the exercise of one of the greatest, most natural and agreeable pleasures thereof, and that is their nocturnal or venereal embraces; a pleasure peculiar to a married life, or at least it ought to be so, for it is not permitted to any besides. And let not any think it strange that we pretend to give directions to do what nature teacheth every one, since it is well known, that nature has been assisted by art in some of our most noble observations; besides, it is not the bare performing of that act that they are directed to, but the performing of it so that it may be efficacious for the production or generation of man, which our great master Aristotle designs in this last legacy to the world. To which purpose, some things are to be observed previous to this act, and some things consequent upon it.

First, Things previous to it.

When married persons design to follow the propensions of nature for the production of the fair images of themselves, let every thing that looks like care and business be banished from their thoughts, for all such things are enemies to Venus; and let their animal and vital spirits be powerfully exhilerated by some brisk and generous restoratives; and let them, to invigorate their fancies, survey the lovely beauties of each other, and bear the bright ideas of them in their minds. And some have thought it necessary, for the further hathening of their joys, for the brisk bridegroom to delineate the scene of their approaching happiness unto the amorous bride, in some such heroical rapture as this,

I will enjoy thee now, my fairest; come,
And fly with me to love's elysium;
Now my enfranchis'd hand on every side
Shall o'er thy naked, polish'd ivory slide.
Now, free as th' ambient air, I will behold
Thy braided snow, and thy unbraided gold.
No curtain now, tho' of transparent lawn,
Shall be before thy virgin treasure drawn.
Now thy rich mine, to my inquiring eye,
Expos'd, shall ready for my mintage lie.
My rudder, with thy bold hand, like a try'd,
And skilful pilot, thou shalt steer, and guide.
My bark into Love's channel, where it shall,
Dance, as the bounding waves do rise and fall.
And my tall pinnace in the Ciprian freight,
Shall ride at anchor, and unlade her freight.

Having by these, and other amorous arts which love can better dictate than my pen, wound up your fancies to the highest pitch and desire.

Perform those rites which mighty Love requires,
And with each other quench your am'rous fires.

But then, in the second place, when coition is over, some further directions are necessary; and therefore, let the bridegroom take heed how he retreats too soon out of the field of love, lest he should thereby leave an entrance too open, and cold should strike into the womb. But, after he has given time for the matrix to close up, he may withdraw and leave the bride in her soft repose, which ought to be with all the calmness that the silent night, and a mind free from all disturbing care, can give, inclining her to rest on her right side, and not removing, without great occasion, till she has taken her first sleep. She also ought to have a great care of sneezing, and avoid coughing, if it is possible, or any other thing that causes a too violent emotion of the body: Neither should these amorous engagements be too often reiterated, till the conception be confirmed; and even then the bridegroom should remember, that it is a market that lasts all the year, and so should have a care of spending his stock too lavishly. Nor would the bride like him at all the worse for it: for women rather chuse to have a thing well done, than to have it often, and well and often too can never hold out.

CHAP. IX.

The Midwives' Vade-Mecum: Containing particular Direction for Midwives, Nurses, &c.

THOSE who take upon them the office of a Midwife, ought to take care to fit themselves for that employment, with the knowledge of those things that are necessary for the faithful discharges thereof. And such persons ought to be of the middle age, neither too young nor too old, and of a good habit of body, nor subject to diseases, fears or sudden frights; nor are the qualifications assigned for a good surgeon improper for a midwife, viz. a lady's hand, a hawk's eye, and a lion's heart: to which may be added, activity of body, and convenient strength, with caution and diligence, not subject to drowsiness, nor apt to be impatient. She ought also to be sober, affable, courteous, chaste; not covetous nor subject to passion, but bountiful and compassionate. And, above all, she ought to be qualified as the Egyptian midwives of old, that is, to have the fear of God, which is the principal thing in every state and condition, and will furnish her, in all occasions, both with knowledge and discretion.

When the time of birth draws near, and the good woman, finds her travailing pains begin to come upon her, let her send for her midwife in time; better too soon than too late, and get those things ready which are proper upon such occasions. When the midwife comes, let her first find whether the true time of the birth be come, for want of observing this hath spoiled many a child, and endangered the life of the mother, or at least put her to twice as much pain as she needed. For unskilful midwives not minding this, have given things to force down the child, and thereby disturbing the natural course of her labour: whereas, nature works best in her own time and way. I do confess, it is somewhat difficult to know the true time of some women's labour, they being troubled with pains so long before their true labour comes, in some weeks before, the reason of which I conceive to be the heat of the reins, and this may be known by the swelling of their legs; and therefore when women with child find their legs to swell much, they may be assured that their reins are too hot. For the cure whereof, let them cool

the reins before the time of their labour, with oil of poppies, and oil of violets, or water lilies, by anointing the reins of their back with them; for such women whose reins are over hot, have usually hard labour. But in this case, above all the remedies that I know, I prefer the decoction of plantain leaves and roots; you may make a strong decoction of them in water, and then having strained and clarified it with the white of an egg, boil it into a syrup with its equal weight in sugar, and keep it for your use.

There are two skins that compass the child in the womb, the one is the amnois, and this is the inner skin; the other is the alantois, and this is the skin that holds the urine of the child during the time that it abides in the womb: both these skins, by the violent stirring of the child near the time of the birth, are broken: and then the urine and sweat of the child contained in them fall down to the neck of the womb; and this is that which the midwives call the water, and is an infallible sign that the birth is near, so the child is no longer able to subsist in the womb, when those skins are broken, than a naked man is in the cold air. These waters, if the child comes presently after them, facilitate the labour, by making the passage slippery; and therefore the midwife must have a care that she force not the water away, for nature knows better the true time of the birth than she, and usually retains the water til that time.

Several Medicines to cause speedy Delivery.

A LOADSTONE held in her left hand. Take wild tansy and bruise it, and apply it to the woman's nostrils. Take date stones and beat them to powder, and let her take half a dram of them in white wine at a time.

Take parsley, bruise it and press out the juice, and put it up, being so dipped, into the mouth of the womb, and it will presently cause the child to come away, though it be dead, and after burden also; besides, it cleanseth the womb, and also the child in the womb of all gross humours.

Let no midwife ever force away a child, unless she be sure it is dead. I once was where a woman was in labour, which being very hard, her midwife sent for another midwife to assist her, which midwife sending the first down stairs, and designing to have the honour herself, forced away the body of the child, and left the head behind, of which the woman was forced afterwards to be dilivered by a man midwife.

After the child is born, great care is to be taken by the midwives in cutting the navel string, which, though by some is accounted but a trifle, yet it requires none of the least skill of a midwife to do it with that prudence and judgment that it ought. And that it may be done so, you must consider as soon as the child is freed from its mother, whether it be weak or strong (for both the vital and natural spirits are communicated by the mother of the child by the navel string) if the child be weak, put back gently part of the vital and natural blood in the body of the child by its navel, for that recruits a weak child; but if the child be strong you may forbear.

As to the manner of cutting the child's navel string, let the ligature or binding be very strong, and be sure do not cut it off very near the binding, lest the binding unloose. You need not fear to bind the navel string very hard, because it is void of sense and the part of the navel string which you leave on, falls off in its own accord in a few days; the whole course of nature being now changed into the child, it having another way ordained to nourish it. It is no matter with what instru-

ment you cut it off, so it be sharp, and you do it cleaverly. The piece of the navel string that falls be sure you keep from touching the ground: remember what I have before told you. And if you keep it by you it may be of use. The navel string being cut off, apply a little cotton or lint to the place to keep it warm, lest the cold enter into the body of the child, which it will be apt to do if it be not bound hard enough.

The next thing to be done, is to bring away the afterbirth or secundine, else it will be very dangerous for the woman. But this must be done by gentle means, and without any delays for in this case especially, delays are dangerous: and whatever I have set down before, as good to cause speedy delivery, and bring away the birth, is good also to bring away the after birth.

And after the birth and after birth are brought away, if the woman's body be very weak, keep her not too hot; for extremity of heat weakens nature and dissolves the strength; but whether she be weak or strong let no cold air come near her at first; for cold is an enemy to the spermatic parts. If cold get into the womb, it increases the after pains, causes swellings in the womb, and hurts the nerves.

If what I have written be carefully observed among midwives, and such nurses as keep women in their lying-in, by God's blessing, the child-bed women may do very well, and both midwife and nurse gain credit and reputation.

For though these directions may in some things thwart the common practice, yet yet they are grounded upon experience, and will infallibly answer the end.

But there are several accidents that lying-in women are subject unto which must be provided against, and these I shall speak of next.

The first I shall mention are the after pains, about the cause of which, authors very much differ, some think they are caused by thinness, some by the thickness, some by the sliminess, and some by the sharpness of the blood; but my own opinion is, it proceeds from cold and water. But whatever the cause may be, the observing of the foregoing directions will very much abate them, if not quite take them away. But in case they do happen, boil an egg, and pour out the yolk of it, with which mix a spoonful of cinnamon water, and let her drink of it; and if you mix two grains of ambergrease with it, it will be better.

The second accident lying-in women are subject to, is excoriations in the lower part of the womb. To help this, use oil of sweet almonds, or rather oil of St. John's wort, with which anoint the parts.

Another accident is, that sometimes through very hard labour, and great straining to bring the child into the world, the lying in woman comes to be troubled with the hemorrhoids or piles; to cure this let her use polypodium bruised and boiled in her meats and drinks.

A fourth thing that often follows, is the retention of the menses; this is very dangerous, and, if not remedied, proves mortal.

But for this, let her take such medicines as strongly provoke the terms: and such are piony roots, dittany, juniper berries, betony, centaury, savory, pennyroyal, sage, feverfew.

The last thing I shall mention, is, the overflowing of the menses. This happens not so often as the foregoing, but yet sometimes it does, and in such cases take the shepherd's purse, either boiled in a convenient liquor or dried and beaten to powder, and you will find it very good to stop them.

Having thus finished my Vade-Mecum for midwives, before I con-

clude, I will add something of the choice and qualifications of a good nurse, that those who have occasion for them may know how to order themselves for the good of their children which they nurse.

First, then, if you would chuse a good nurse, chuse one of a sanguine complexion, not only because that complexion is generally accounted best, but also, because all children in their minority have their complexion predominant. And that you may know such a woman, take the following description of her.

Her stature of the middle size, her body fleshy, but not fat, and of a merry, pleasant and cheerful countenance: a fresh ruddy colour, and her skin so very clear, that you may see her veins through it. She is one that loves company, and never cares to be alone; never given to anger, but mightily to playing and singing; and which makes her the fittest part for a nurse, she very much delights in children. In chusing such a one you can hardly do amiss; only let me give you this caution, if you cannot yet one exactly of this description, which you will find very difficult, get one as near as you can to it. And let these rules further guide you in your choice. 1. Let her age be between 20 and 30, for then she is in her prime. 2. Let her be in health, for sickness infects her milk, and her milk the child. 3. Let her be a prudent woman, for such a one will be careful of the child. 4. Let her not be too poor, for, if she wants, the child must want too. 5. Let her be well bred, for ill bred nurses corrupt good nature. 6. If it be a boy that is to be nursed, let the nurse be such an one whose last child was a boy, and so it will be the more agreeable, but if it be a girl, let the nurse be one whose last child was a girl. 7. If the nurse has a husband, see that he be a good likely man, and not given to debauchery, for that may have an influence upon the child. 8. In the last place, let the nurse take care she be not with child herself; for if so, she must of necessity either spoil her own child, or yours, or perhaps both. To a nurse thus qualified you may put your child without danger. And let such a nurse observe the following directions, for the better governing and ordering herself in that station.

Directions for Nurses.

1. LET her use her body to exercise; if she hath nothing else to do, let he exercise herself by dancing the child; for moderate exercise causeth good digestion; and I am sure good blood must needs make good milk, and good milk cannot fail of making a thriving child. 2. Let her live in good air; there is no one thing more material than this. The want of this makes so many children die in London; and even those few that live, are none of the wisest; for gross and thick air makes unwieldy bodies, and dull wit: and let none wonder at this, for the operation of the air to the body of man is as great as meat and drink, for it helps to engender the vital and animal spirits; and this is the cause of sickness and health, of life and death. 3. Let her be careful of her diet, and avoid all salt meats, garlick, leeks, onions, and mustard, excessive drinking of wine, strong beer or ale, for they trouble the child's body with choler: cheese, both new and old, afflicts it with melancholy, and all fish with phlegm. Let her never deny herself sleep, when she is sleepy, for by that means she will be more wakeful when the child cries. Let her avoid all disquiets of mind, anger, vexation, sorrow and grief, for these things very much disorder a woman, and therefore must be hurtful to the milk. If the nurse's milk happen to be corrupted by any accident, as sometimes it may be, by being either too hot

or too cold, in such cases let her diet be good, and let her observe the cautions already given her. If her milk be too hot, let her cool it with endive, succory, lettuce, sorrel purslain, and plantain; if it be too cold, let her use beverage, vervain, buglos, mother of thyme, and cinnamon; and let her observe this general rule, whatsoever strenghens the child in the womb, the same attends the milk. If the nurse wants milk, the thristle commonly called our lady thristle is excellent for her breeding of milk; there being few things growing (if any) that breed more and better milk than that doth; also the hoof of the fore feet of a cow, dried and beaten to powder, and a dram of the powder taken every morning in any convenient liquor, increases the milk.

Remedies for increasing Milk.

IF a nurse be given to much sweeting, it makes her lean, and hinders digestion, and she can never have store of milk, nor what she has be good. Bad meats and drinks, also hinder the increase of milk, and therefore ought to be forbone and therefore women that would increase their milk, should eat good meat (that is if they can get it) and let her drink milk wherein fennel seed hath been steeped. Let her drink barley water, burrage and spinnage; also, goat's milk, cow's milk and lamb sodden with verjuice; let her also comfort the stomach with confection of annis-seed, carraway and cummin seeds, and also use those seeds sodden in water; also take barley water, and boil therein green fennel and dill, and sweeten it with sugar, and drink it at your pleasure.

Hot fomentations open the breasts, and attack the blood, as the decoction of fennel, smellage, or stampt mint applied. Or,

Take fennel and parsley green, each a handful, boil and stamp them, and barley meal half an ounce, with seed a dram, storax, calamint two drams, oil of lilies two ounces, and make a poultice.

Lastly, take half an ounce of deer's suet and as much parsley roots, with the herbs an ounce and a half of barley meal, three drams of red storax, and three ounces oil of sweet almonds; boil the root and herbs well, and beat them to pap, and then mingle the other amongst them, and put it warm to the nipples, and it will increase the milk.

And thus, courteous Reader, I have at length finished what I designed and promised, and can truly affirm, that thou hast here those Receipts, Remedies and directions given unto thee, with respect to Child bearing Women, Midwives and Nurses, that are worth their weight in gold, and will assuredly with the blessing of God, answer the end, whenever thou hast occasion to make use of them, they being not things taken on trust from tradition or hearsay, but the result and dictates of sound reason and long experience.

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